



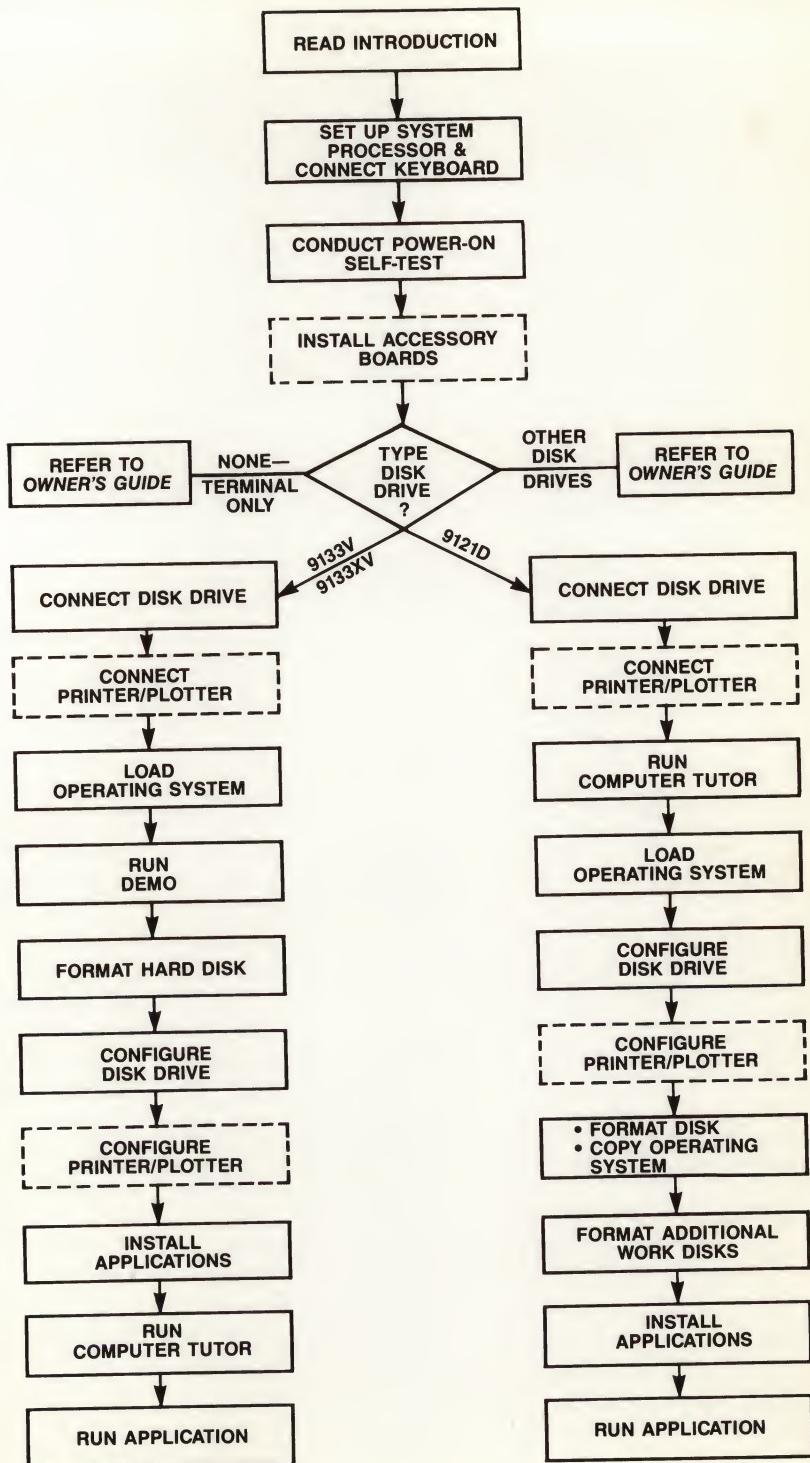
Getting Started with Your HP 150 Touchscreen Personal Computer

Read this booklet first



Open this flap
to see flowchart





Getting Started with Your HP 150 Touchscreen Personal Computer

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The manual printing date and part number indicate its current edition. The printing date changes when a new edition is printed. (Minor corrections and updates which are incorporated at reprint do not cause the date to change.)

First Edition — May 1984

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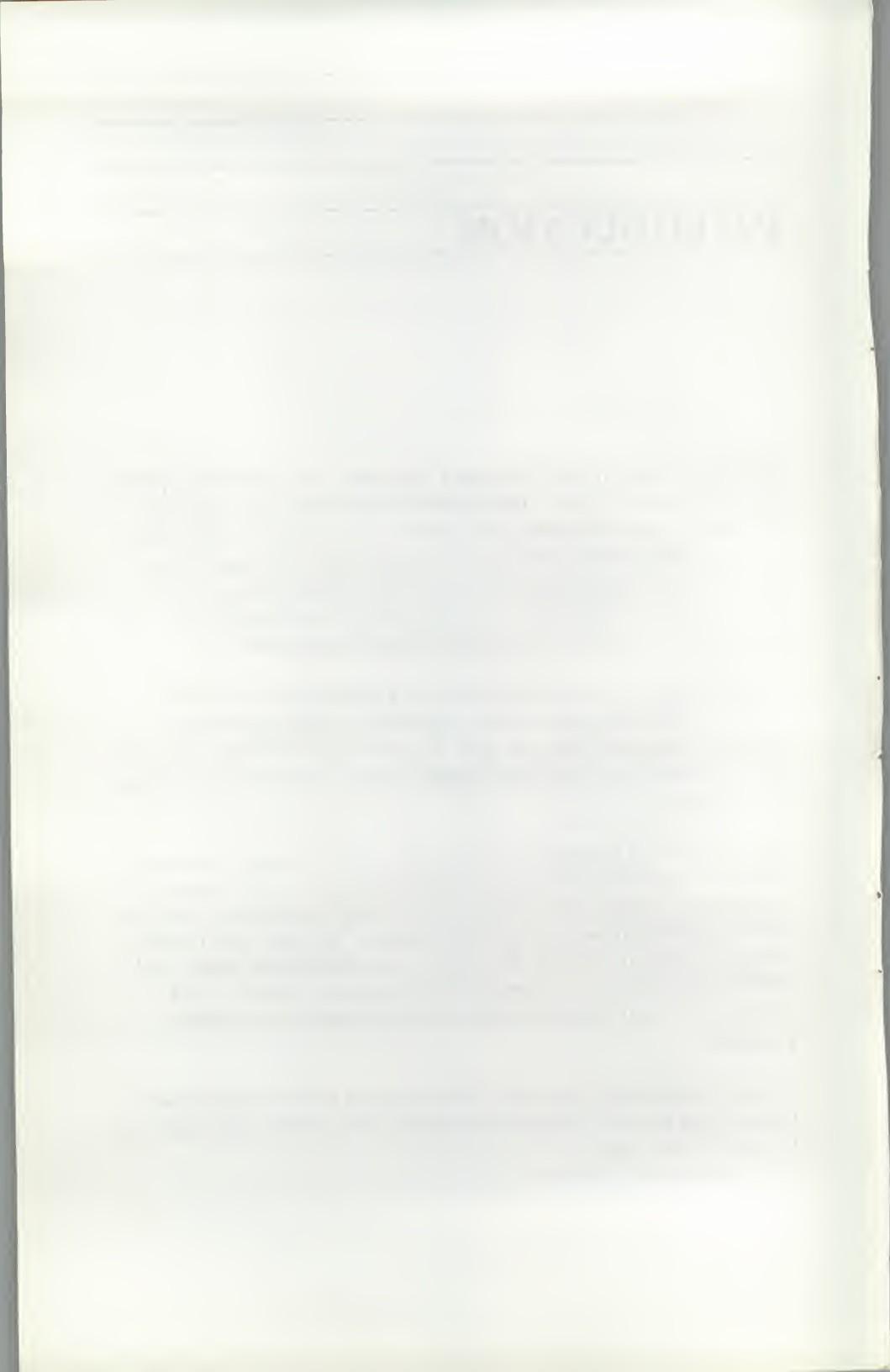
INTRODUCTION

Welcome to the HP 150 Personal Computer! The HP 150 is special in a lot of ways. It has a **touch screen** which lets you work the computer by just pointing your finger at the display, and it has a feature called P.A.M. (for Personal Applications Manager) that organizes your applications for you. This means that you don't have to learn or remember a lot of computer instructions (or even know how to type) to work faster and get more done.

In this booklet, you will learn how to physically set up your system (what cable goes where) and how to load application programs onto new discs so that you can begin working. The flow chart (fold out the front cover) gives you an overview of the steps to be taken.

The HP 150 is a powerful and versatile tool; the more you know about its capabilities, the more it will do for you. You can use it as a computer terminal and connect it to a large system; or you can use it with disc drives as a microcomputer. You can use it with a variety of fixed or flexible disc drives, (the **HP 9121D**, **9133V** and **9133XV** disc drives are covered in this booklet), printers, and plotters, and you can also add accessory boards to its system processor.

To learn more about your HP 150, you must refer to the *Owner's Guide*. This booklet will get you started; the manual will take you the rest of the way.

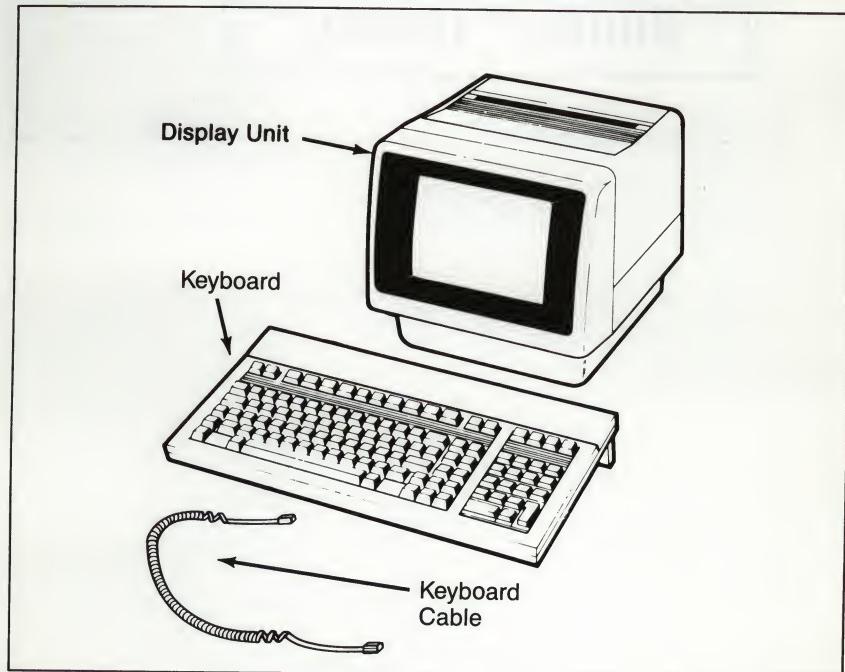


Chapter 1

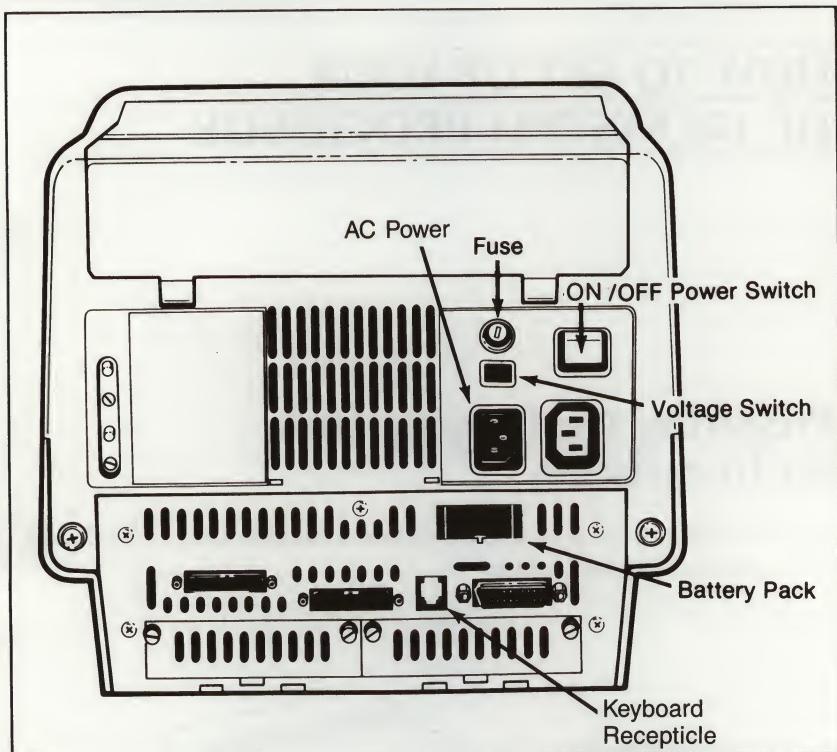
HOW TO SET UP YOUR HP 150 SYSTEM PROCESSOR

Preparing the Display Unit for Installation

Your HP 150 system processor includes a **display unit**, a **keyboard**, and a coiled **keyboard cable**.



Look at the rear panel of your display unit.

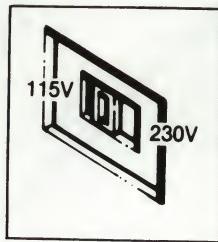


Display Unit Preparation

There are a few things you must do to prepare your HP 150 for use. Performing these steps will prevent possible damage to your system.

Look at the rear of your system processor to perform the following.

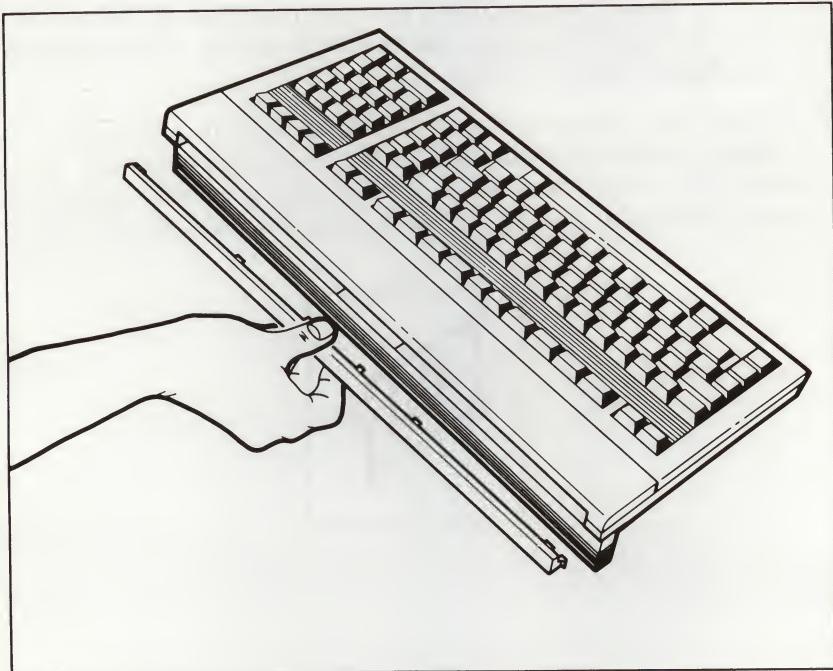
1. Turn the **Power Switch OFF**. (Press the lower half of the power switch for the OFF setting. The red circle on top of the switch is visible when power is OFF.)
2. Change the **voltage** setting to the voltage in your area. The voltage in the U.S. is **115 VAC**, as shown in the illustration below. (To change the voltage setting, push the switch to the left with a ball point pen for 115 VAC and to the right for 230 VAC.)



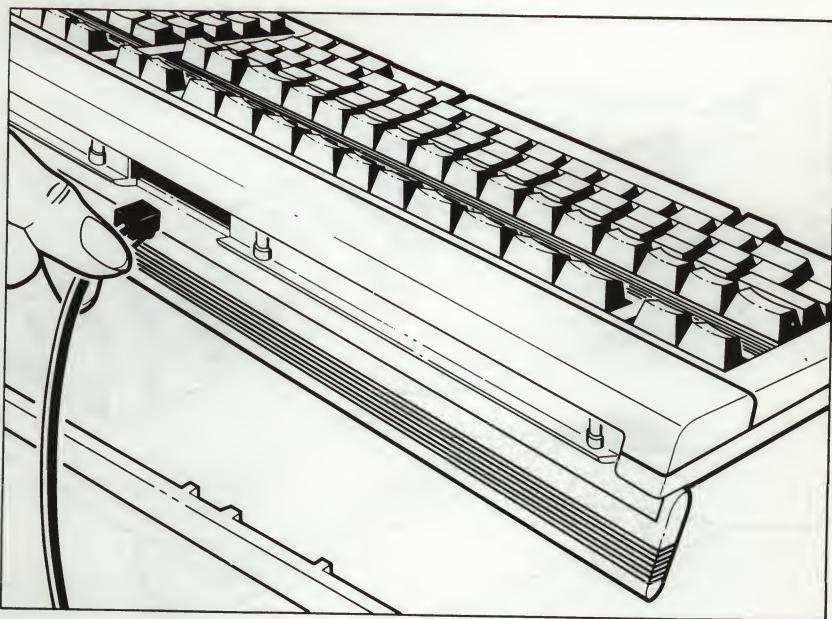
Connecting the Keyboard

Now you are ready to connect the keyboard to the display unit.

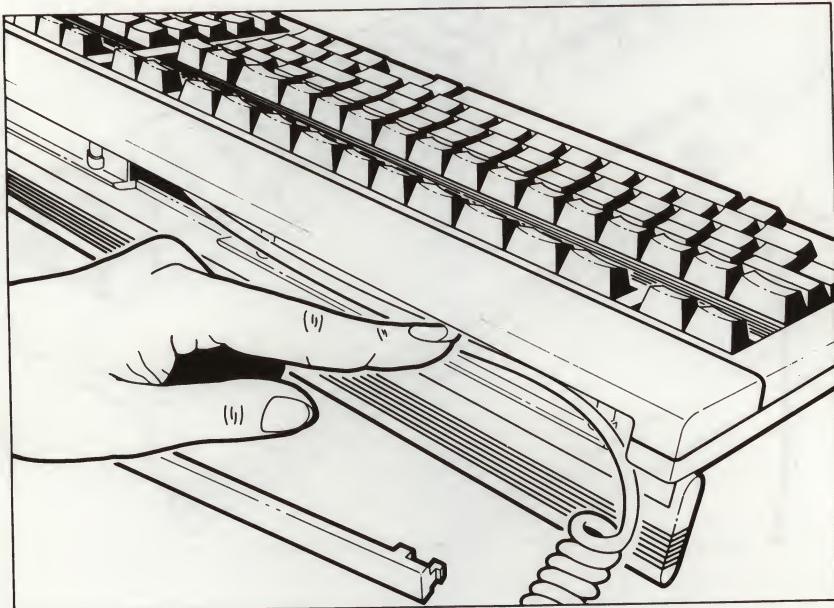
1. Remove the **CABLE CAP** from the back of the keyboard by gently squeezing the cap in the center and pulling it straight out.



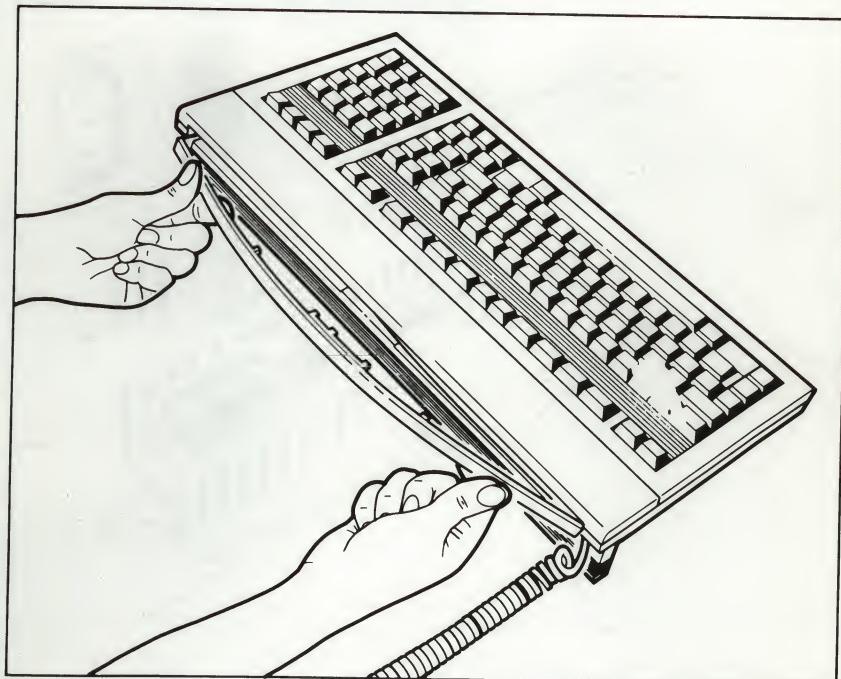
2. Plug the coiled keyboard cable into the jack at the rear of the keyboard.



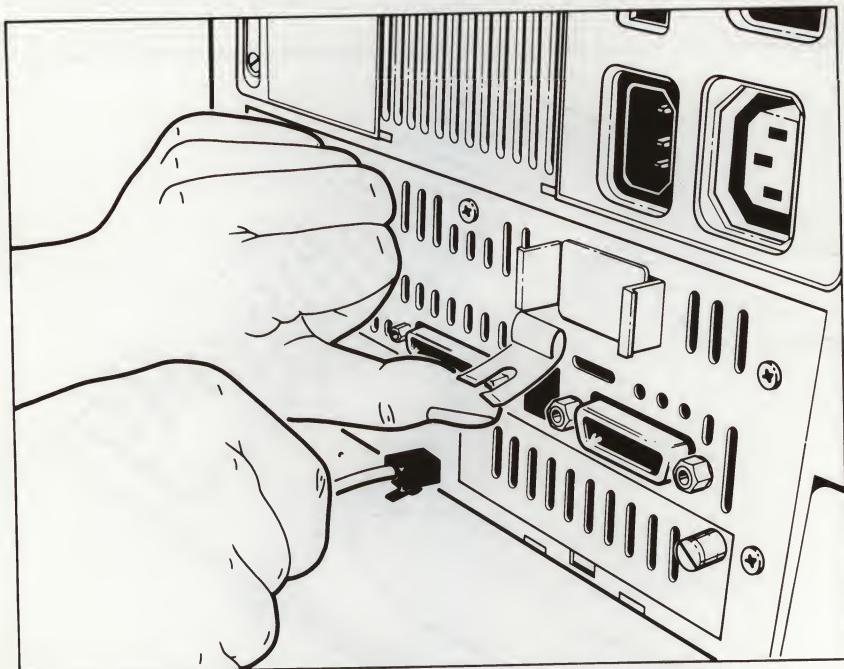
3. Place the uncoiled portion of the cable in the right cable channel at the rear of the keyboard (holding it in place with your finger). Make sure the cord follows the indentation until it reaches the end of the keyboard, as shown below.



4. Replace the cable cap. The cap's center tab goes below the cable jack. Gently bend the cap at the center and insert both ends of the cable cap into the notches at the end of the cable channel. The cap will snap back into place.



5. Connect the other end of the keyboard cable to the jack labelled **KEYBOARD ONLY** on the rear panel of the display unit. (Lift up the plastic cover and insert the cable plug.)



CAUTION

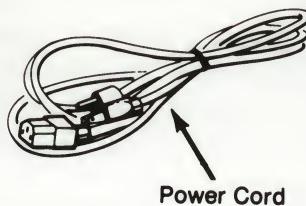
To avoid damage to your computer, you must **NOT** use the keyboard jack on the rear panel of your system processor for telephone lines or modem cables or other connectors. **ONLY** the keyboard connector should be inserted in the keyboard jack.

6. (Optional.) Set up the built-in keyboard stand. (The gray panel underneath your keyboard is the built-in keyboard stand. It swivels out to tilt your keyboard for easy typing.)

Chapter 2

STARTING THE SYSTEM PROCESSOR—THE POWER-ON SELF-TEST

1. Insert the **POWER CORD** into the **AC INPUT** socket on the rear panel of the system processor. Then plug the cord into a wall socket.



CAUTION

DO NOT USE EXTENSION CORDS UNDER ANY CIRCUMSTANCES. The use of extension cords can cause data errors and may also be a safety hazard. Your computer must be plugged into a grounded, three-prong outlet with a controlling circuit breaker. If a multiple-outlet strip meets these requirements, it may be used.

2. Turn the **POWER** switch to the **ON** position. (Press down the top half of the switch.)

When you turn the system on, you will hear the quiet, internal fan start up. Every time you turn on your **HP 150**, the computer automatically carries out a **Power-On Self-Test** to make sure the

system processor is operating correctly. If the test is successful, you will hear a few beeps. Then the following message appears on the bottom of your screen:

Load Op Sys failed, Op Sys device not found
Press RETURN to Clear

This means that the system processor was trying to find information from a disc. Since you have not yet connected your disc drive, of course it could not get this information.

3. Turn the **POWER SWITCH** to the **OFF** position.

If Something Went Wrong

If the Power-On Self-Test fails, the following error message appears on the bottom of your screen:

Power on test failed (and a code number)

Your *Series 100 Support Guide* (a booklet in the front of the *HP 150 Personal Computer Owner's Guide*) has a list of phone numbers for different types of support problems. Call the appropriate support person.

If nothing happens when you turn the system on, wait another 60 seconds. Sometimes new display units take longer to warm up. If there is still nothing on the screen, check the following points:

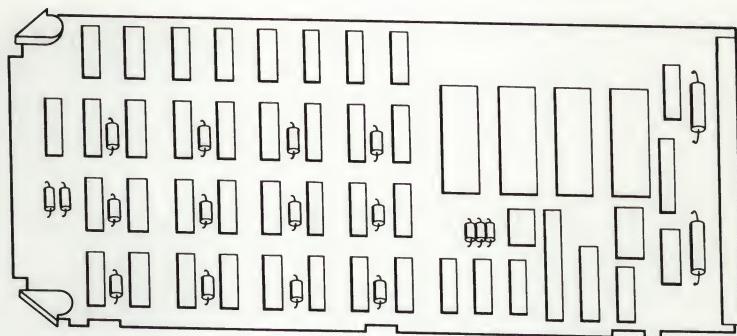
- The **power** switch on the rear panel of the system processor is turned **on**.
- The **system processor** is plugged in.
- Your **electric outlet** is functioning. (Check this by plugging a lamp or other electrical appliance into the same outlet.)
- The **voltage** setting is correct.

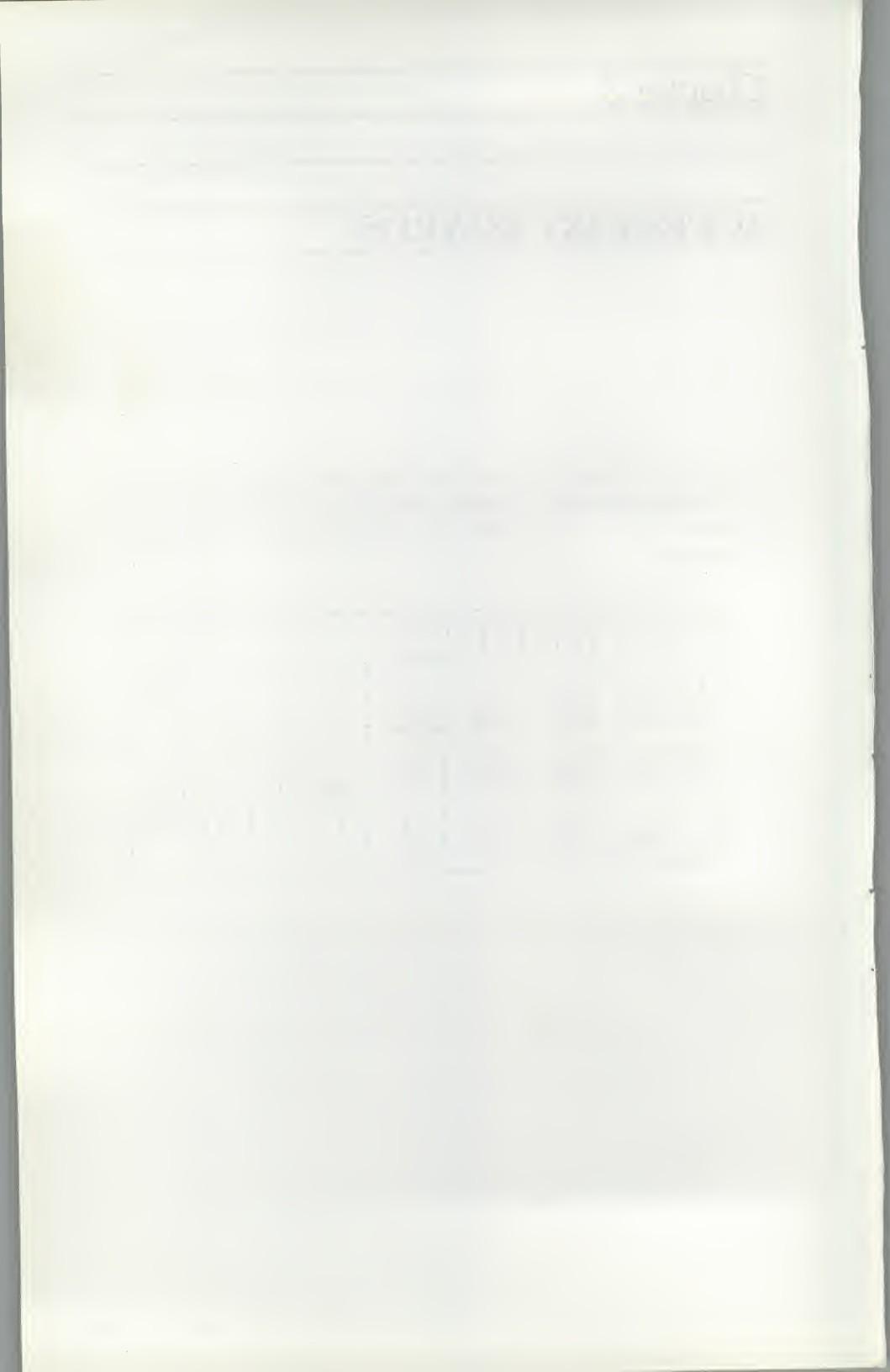
If all of the above points check out, and your system still does not work, call the appropriate support person as listed in your *Series 100 Support Guide* (located in the front of your *Owner's Guide*).

Chapter 3

ACCESSORY BOARDS

If you plan to install an accessory board (like additional memory), you should do so now — before connecting your disc drive, printer or plotter. Turn to page 2-93 in the *Owner's Guide* for installation information.



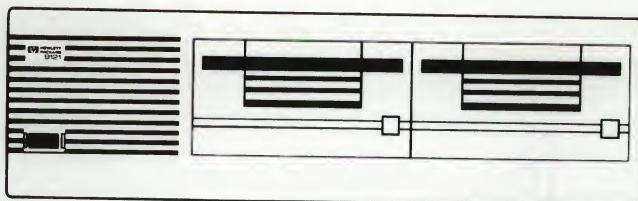


Chapter 4

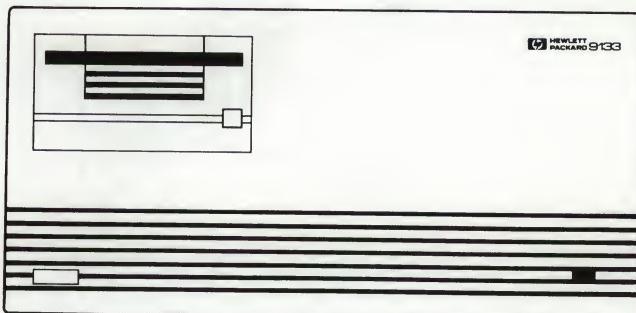
YOUR DISC DRIVE

There are a number of disc drives available for the HP 150. In this booklet, you will learn how to connect the **HP 9121D** flexible disc drive and the **HP 9133V** or **9133XV** fixed disc drive. Instructions for connecting other disc drives to your system processor are found in the section on disc drives in your *Owner's Guide*.

If you have a **9121D disc drive** go to page 4-2.

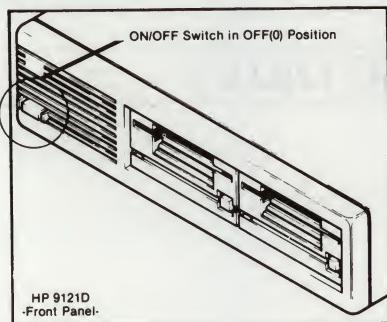


If you have a **9133V** or **9133XV** go to page 4-32.



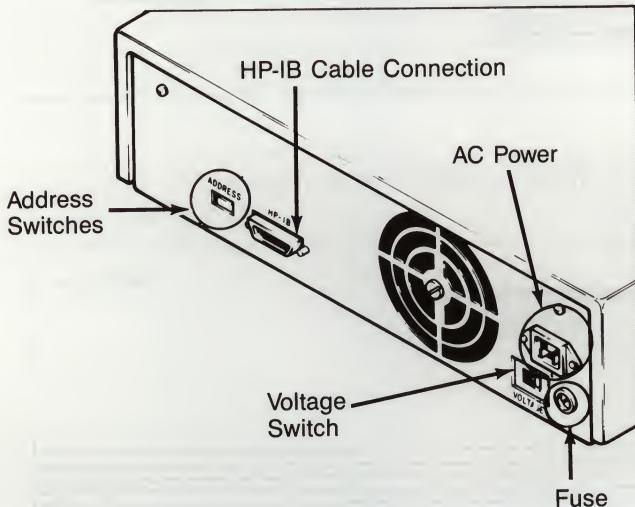
The HP 9121D Disc Drive

Preparing the 9121D Disc Drive for Installation

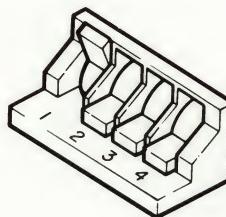


Perform the following preparatory steps to save time and prevent potential data loss:

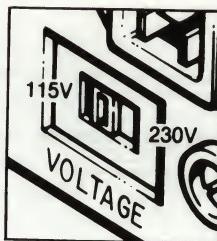
1. Make sure the **Power Switch** on the front of the disc drive is in the **OFF** position. (The power switch, marked 'line' on most models, is pressed on and off. When the button is recessed the switch is ON, and when it sticks out, the switch is OFF.)
2. Turn your disc drive around so that you are looking at the rear panel.



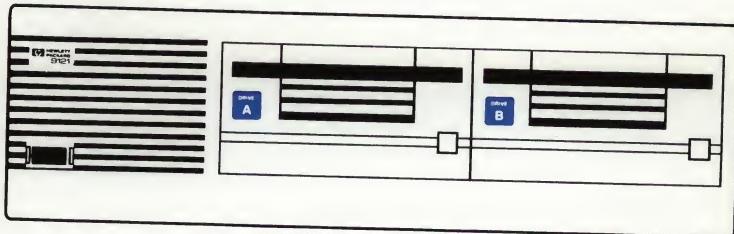
3. Make sure the **address** switches are set as shown below. (You may use a ball point pen to set the switches as shown below. For example, the left-most switch is up.)



4. Make sure the **voltage** switch is set to the voltage in your area. The voltage in the U.S. is 115 VAC, as shown in the illustration below. (To change the voltage setting, push the switch to the left for 115 VAC and to the right for 230 VAC.)

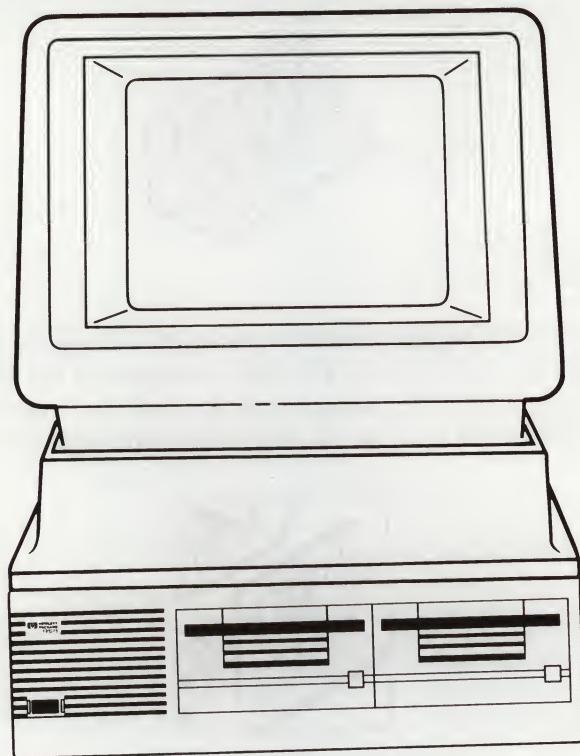


5. Turn your disc drive around so that you are looking at the front panel.
6. Now you can place the A sticker next to the left disc drive, and the B sticker next to the right disc drive. (A and B are the 'names' that the operating system uses to address the discs.)

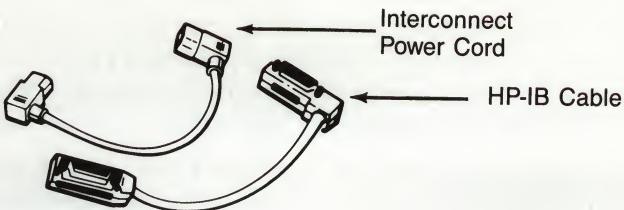


Connecting the Disc Drive to the System Processor

1. Place your system processor on top of the disc drive.

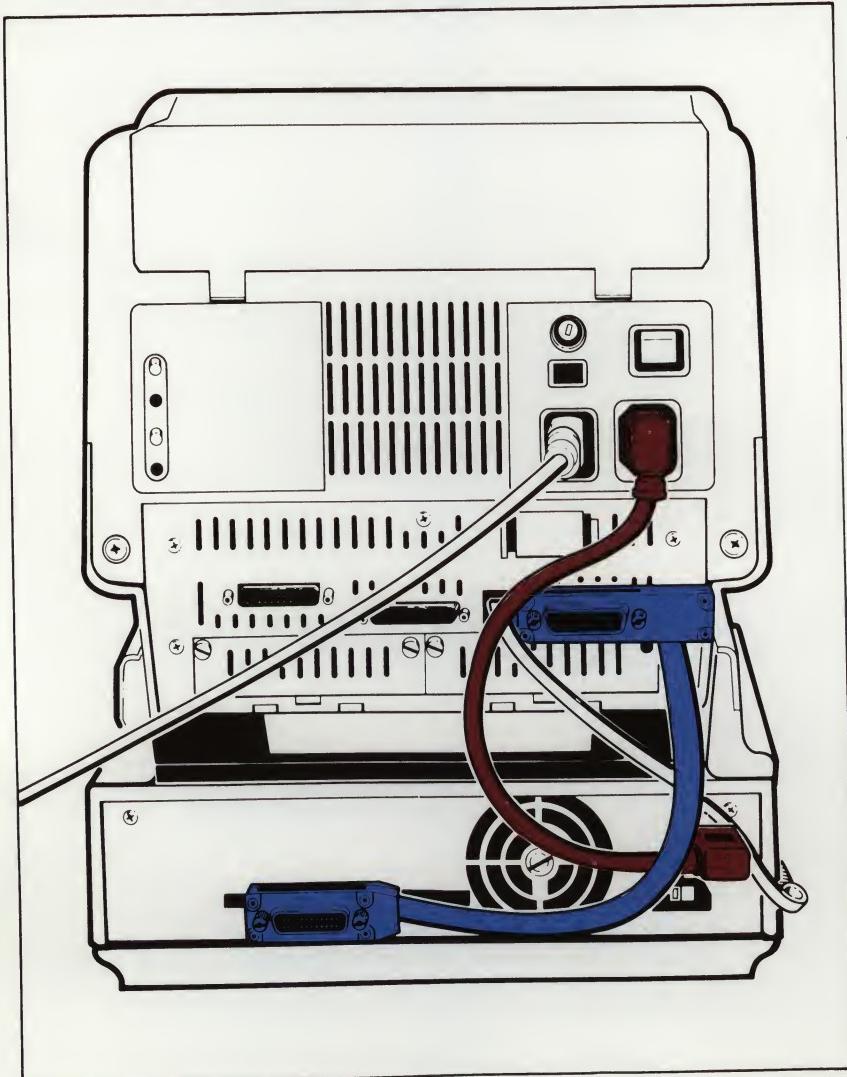


2. Locate the cables shown below.



3. Turn both the system processor and the disc drive around so that you face the back.

4. Connect the **HP-IB** cable to the system processor and the disc drive, as shown in blue below. Notice that the cable ends are different. Use the picture to see which end goes to which plug. (The connection points are labelled on the rear panels of the disc drive and display unit.) Plug the cable ends in. Use your fingers to secure the screws. DO NOT USE A SCREWDRIVER.
5. Plug one end of the **Interconnect Power Cord** into the **AC OUTPUT** outlet on the rear panel of the system processor and the other end in the **AC LINE** socket on the rear panel of the disc drive, as shown in red in the illustration below.



Now you are ready to turn on your disc drive.

6. Turn the **system processor** power switch **ON**. (Remember, this switch is on the back of the system processor.)
7. Turn the **disc drive** power switch **ON**. (Press the button, marked 'line' on most models, on the front panel one or two times until the button is recessed.)

You should now hear a whirring noise. This is the sound of the drive and fan starting. (You might also see a red light on the front of the drive blink on and off, once or twice, rather quickly. If you don't see the light, don't worry, it flashes only briefly.)

You will see the following message on the screen after a few seconds:

**Load Op Sys Failed, Op Sys device not found
Press RETURN to continue.**

This means that the system is looking for a particular disc which, of course, is not loaded in the disc drive.

If Something Went Wrong

If you don't hear the fan or see the light flash, check that:

- The disc drive **power** switch is **ON**.
- The system processor **power** switch is **ON**.
- The **interconnect power cord** is plugged into the AC OUTPUT outlet on the system processor and the AC LINE socket on the disc drive.
- The **electrical outlet** the system processor is plugged into is functioning. (You might try plugging a lamp into the wall outlet or multiple-outlet strip.)

If you are still not getting any response from your disc drive, call your support person as listed in the *Series 100 Support Guide* (a booklet located in the front of your *Owner's Guide*).

Because you have connected the disc drive to the system processor with the interconnect power cord, your disc drive receives its power from the system processor. Leave the disc drive power switch **ON** all of the time and turn only your system processor switch **ON** and **OFF**. This will control **both** the system processor and the disc drive.

Printers and Plotters

You are now ready to connect your printer(s) and plotter(s). Information needed to install HP printers and plotters is found in **Appendix A** of this booklet.

After you have connected the printer(s) and/or plotter(s) to the system processor, you must tell the computer what kind of equipment you have installed. This process is called **configuring**. But before you can configure your equipment, you need to learn a little more about how your system works.

The **Computer Tutor** that comes with your *Owner's Guide* helps show you how to use your computer. When you are through using the Computer Tutor, you will configure your printer and disc drive, copy the operating system, and install applications.

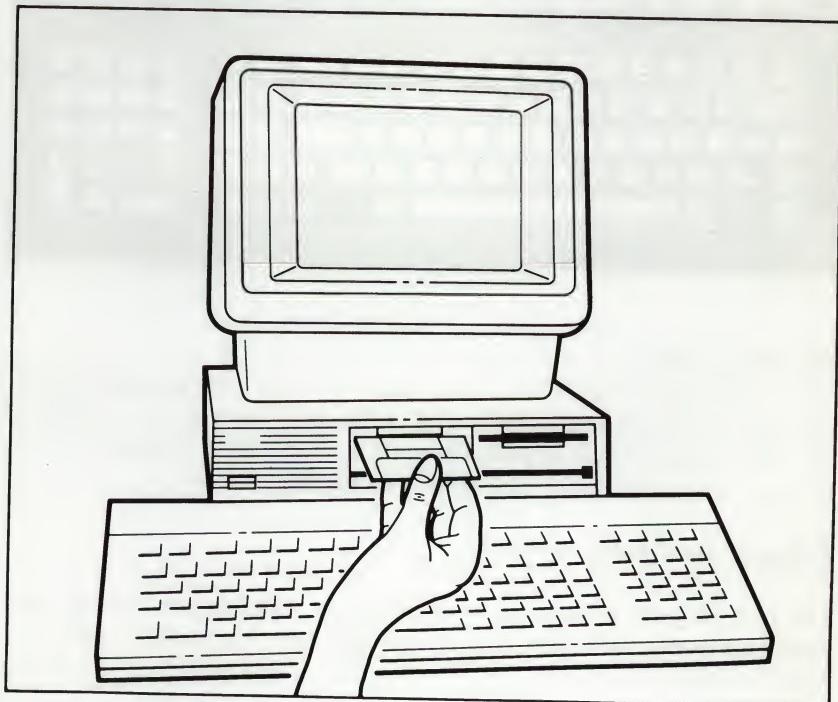
Right now, however, turn to Appendix A and read it carefully if you have any printers or plotters to install. Later you will return here to learn how to use Computer Tutor.

Using the Computer Tutor

Now you are ready to begin using your system. The two Computer Tutor discs found in the back of your *Owner's Guide* help you learn how to use the HP 150 by actually doing things with it.

Before you begin, check to see that:

1. The **Power Switch** on the back of your system processor is **ON**. (Remember that if your disc drive is always turned on, the system processor power switch will control the disc drive.)
2. Locate the tutorial discs (labelled **Computer Tutor 150 Disc A** and **Computer Tutor 150 Disc B**) in the back of the *Owner's Guide*.
3. Take **Computer Tutor 150 Disc A**, holding it so that the metal auto-shutter is away from you.
4. Insert **Disc A**, label-side up, into **Drive A**. Push the disc gently, but firmly, until it clicks into place.



5. Insert Disc B into drive Drive B.

CAUTION

To remove a disc, push the gray button below the drive. NEVER remove a disc while the red disc drive light is on.

Now you are ready to run the **Computer Tutor**.

1. While holding down the **CTRL** and **SHIFT** keys, press the **RESET/BREAK** key.



The drive will begin whirring and clicking, the red lights on the drive will blink on and off, and some messages will appear fleetingly on your screen. After 20 or 30 seconds, a picture of the HP 150 computer will appear on your screen with a blinking message that says **Touch the screen to begin**.

2. **Touch the screen, anywhere.**

The next display to appear on your screen will ask you to type in your first name and then press the **RETURN** key. Go ahead, and do what it says.

As you continue using Computer Tutor, you will notice that on some screen displays you must touch a picture or word on the screen to move to the next display. In other cases, you will be asked to touch one of the eight **soft keys** that appear across the bottom of the screen.

Soft Keys and Function Keys

The eight boxes at the bottom of your screen are touch-sensitive **soft keys**. They correspond to the dark gray function keys labelled **[1]** to **[8]** on the top row of your keyboard. If you do not wish to activate a soft key command by touching the screen, you can press the corresponding key on your keyboard.

-
3. Ending a Computer Tutor session is easy:
-

CAUTION

To remove a disc, push the gray button below the drive. NEVER remove a disc while the red disc drive light is on.

- a. Remove the Computer Tutor discs from your flexible drives.
Put the discs away in a safe place.
- b. Turn your system processor off.

Loading the Operating System

The Computer Tutor is an unusual disc. It comes formatted for your computer, and it has a copy of the operating system already on it. As you may already know, you must start each computer session by inserting a disc with the operating system on it into Drive A. This procedure is called **loading the operating system**.

In the back of your *Owner's Guide* is a **Sys_Master** disc which contains the operating system.

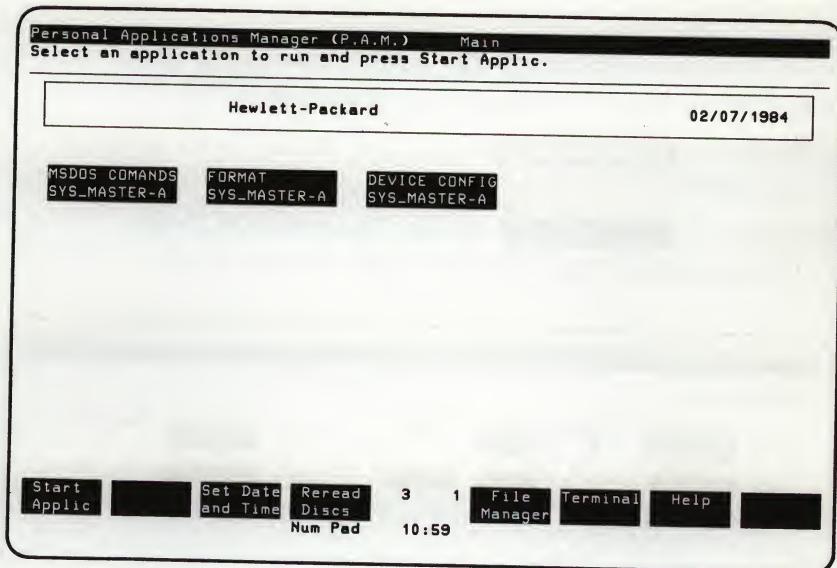
1. Turn the system processor on.
2. Remove the disc labelled **HP Sys_Master** from the back of your *Owner's Guide*.
3. Insert it into Drive A.

Hard Reset

To perform a hard reset press the **RESET/BREAK** key while holding down the **CTRL** and **SHIFT** keys at the same time.

3. Perform a **hard reset**.

This display should appear on your screen after a few seconds:



This is the P.A.M. main menu. P.A.M. is the Personal Applications Manager. P.A.M. makes managing your applications easy.

There are three large boxes in the center of the screen. Each box contains the name of a **P.A.M. application** found on your **Sys_Master** disc. Notice that the first box, the one saying **MSDOS COMMANDS**, is highlighted. Touch the large box that is labelled **FORMAT**. (Do not touch any of the small boxes at the bottom of the screen yet.) Whatever box you touch becomes highlighted, but only one box can be highlighted at a time.

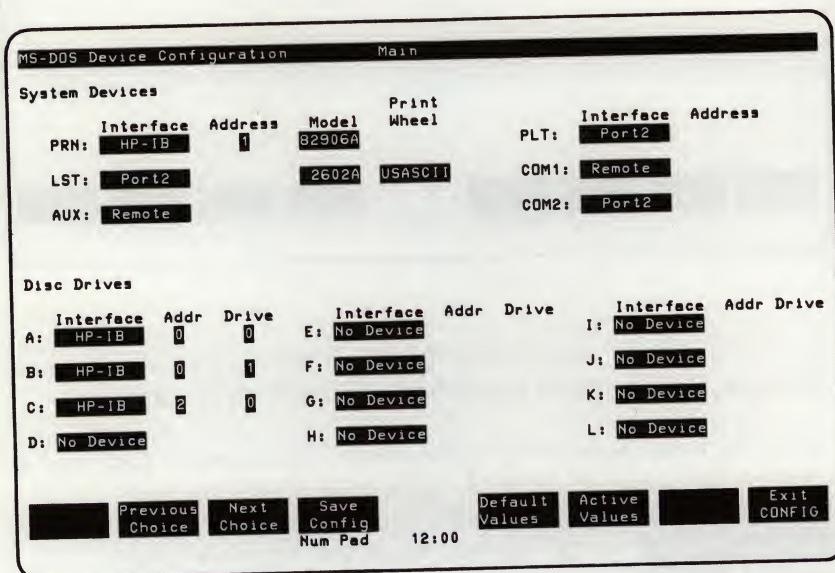
The very first thing you must do, now that your system is connected, is tell the computer what kind of disc drive (model 9121D) you have connected to it. This is called **configuring** your disc drive. Configuring is explained in the next section.

Configuring the Disc Drive

You will only have to configure your disc drive once, unless you add new drives later.

Follow these steps to configure your disc drive:

1. Touch the **DEVICE CONFIG** box on the **P.A.M.** menu until it is highlighted.
2. Touch the **Start Applic** soft key. The **MS-DOS Device Configuration** menu will now appear on your screen.



Screen Messages

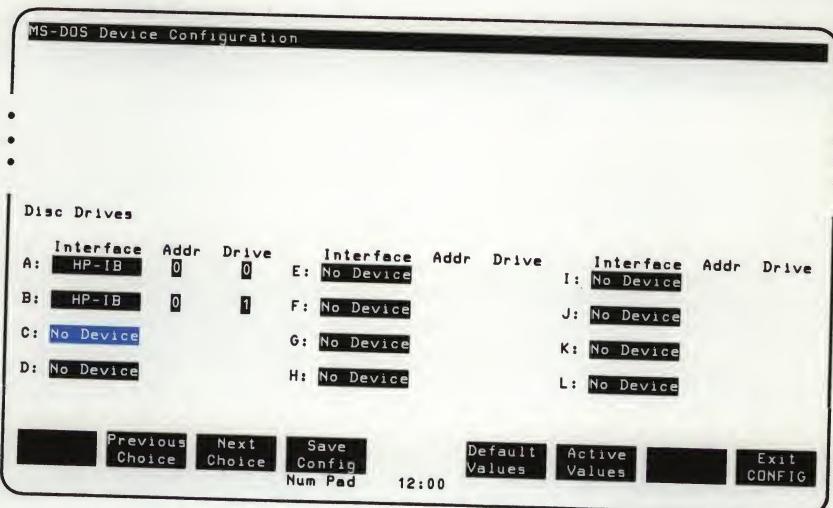
Notice that the name of the display (for example, **Main**), appears at the top of the screen. The second line often displays special instructions or error messages.

The top half of the screen is devoted to System Devices and the bottom half to Disc Drives. You will only have to look at the Disc Drive part of the screen now.

3. Touch the **C: Interface** box on your screen until it is highlighted.

C: HP-IB 2 0

4. Touch the **Next Choice** soft key until **No Device** appears as shown in blue below.



5. Touch the **Save Config** soft key. The message "Device configuration has been saved." will appear on the second line of screen.

Made a Mistake?

You can change the Device Configuration menu at any time. Just touch the box you want to alter and then touch the **Previous Choice** or **Next Choice** soft key. You can touch these soft keys as many times as you want until you get the right combination.

6. Touch the **Exit Config** soft key.

You will now be returned, very quickly, to the P.A.M. menu.

Now that you have configured your disc drive, the P.A.M. menu will always come onto your screen much faster than before.

Configuring Printers and Plotters

You should now configure your printers and/or plotters. Until you do so, they will not work because the HP 150 does not know they are there. This is what configuration does. Turn to Appendix B in this booklet to configure your printers and/or plotters.

Formatting a Disc with the Operating System

Your **Sys_Master** disc is very important — you can't start your computer without it! That is because it has the operating system (the programs that tell the computer how to send and get information from the disc drive) on it.

Discs are fragile, and the information stored on them is too important to risk losing. It is very important that you copy the operating system onto a new disc IMMEDIATELY and that you **install** (copy) the applications on your master discs onto new discs. You cannot just put a blank disc in a disc drive and copy the operating system onto it or install an application; you must **format** the disc first. Formatting a disc prepares it to receive information. You can **ONLY** copy the operating system onto a disc during the formatting procedure.

Facts about formatting your discs:

- You must format a new disc in order to use it.
- You can **ONLY** copy the operating system onto a disc during the formatting procedure.
- If you format a disc that already has data on it, all data will be erased.

Good computer management demands that you make work copies of all your master discs. Now you should prepare to format blank discs for all of your master discs.

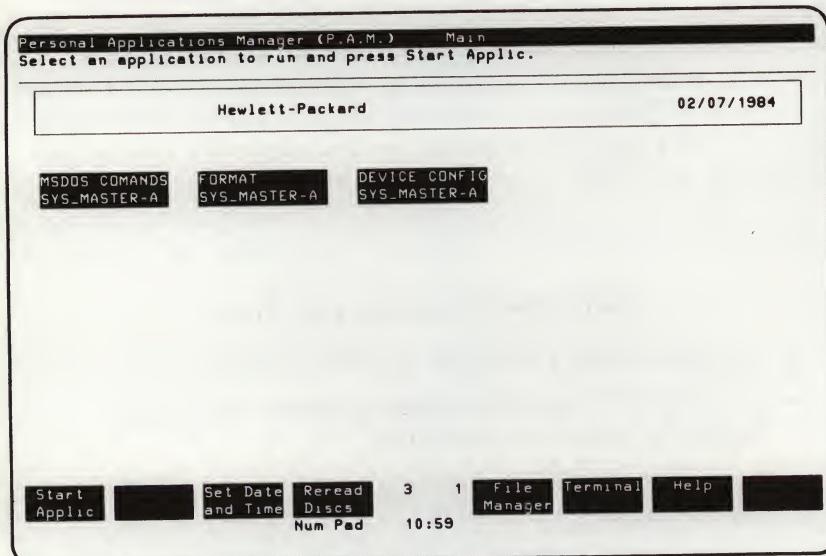
Format your first blank disc with a copy of the operating system on it. You will later install your **Sys_Master** applications on this disc.

Disc Drives

The **Sys_Master** disc in Drive A contains important information that must be copied onto the blank disc in Drive B.

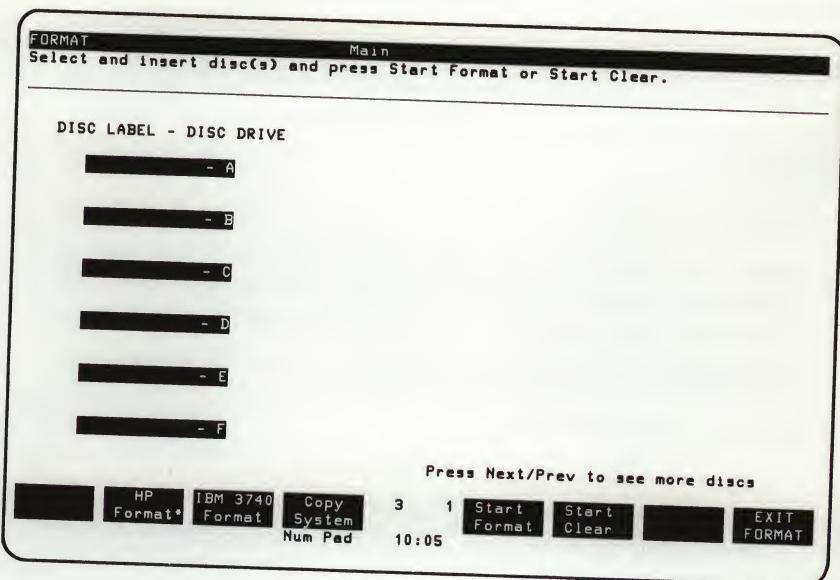
Follow these steps to format a disc with the operating system on it:

1. Make sure the system processor is **ON**. (Remember that the disc drive receives its power from the system processor, so you should always leave your disc drive power switch on.)
2. Make sure the **Sys_Master** disc is in **Drive A**.
3. Make sure the P.A.M. menu is on the screen as shown below.
(If it's not, do a hard reset.)



4. Insert a **new, blank disc** in **Drive B**.
5. Touch the screen where it says **FORMAT SYS_MASTER-A**
6. Touch the soft key labelled **Start Applic** at the lower left corner of the screen.

The **Loading Format** message will now appear on the top line of your screen. The following display will soon appear on your screen. This is the **Format** main menu.



Made a Mistake?

Did you choose the wrong box? If you touched the **MSDOS COMMANDS** box, the **A>** prompt appeared on your screen. To return to the Main P.A.M. menu, just type in the word **EXIT** and press the **RETURN** key.

If you touched the **DEVICE CONFIG** box, touch the **Exit CONFIG** soft key at the far right corner of the screen to return to the Main P.A.M. menu.

If you touched the wrong soft key, touch the **EXIT** soft key on the far right of the screen to return to the main menu. If there is no exit key, perform a hard reset.

The format main menu lists many disc drives. The 9121D unit has two disc drives; they are labelled **A** and **B**. This is why you placed the A and B stickers on the disc drive. These are the names that the operating system uses to access the correct disc drive.

Remember, the task at hand is to use the format application found on the disc in Drive A to prepare the disc in Drive B for future use. (Only discs that have been formatted can be used by the computer.)

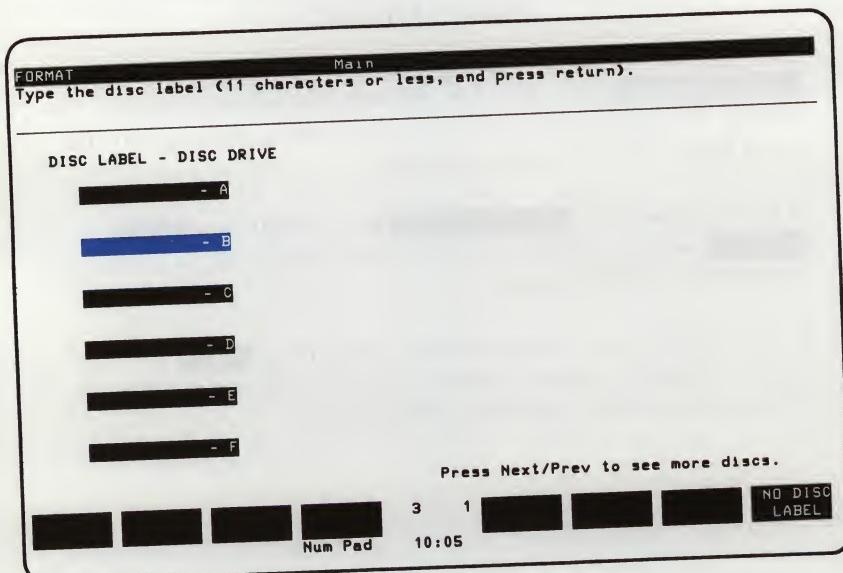
7. Select and label your disc. You can give each of your discs a label up to eleven characters in length. Disc labels help you remember what you have stored on your disc.

- a. Touch the box labelled **B**. (The box will be highlighted.)
b. You have two choices:

Type the disc label. (The letters you type will appear at the top of the screen. Use the **Back space** key to erase characters and make corrections.) Press **RETURN**.

Or

Touch the **No Disc Label** key on the lower right corner of the screen if you don't want to label your disc.



Made a Mistake?

Touched the wrong box? Changed your mind? If, after you've pressed [RETURN] or the [No Disc Label] soft key, you realize you chose the wrong box or typed in the wrong label, you can go back and change it. Just touch the highlighted box so that it is no longer highlighted. Your label will be erased and you can choose another disc drive.

8. Touch the [Copy System] soft key. An asterisk (*) will appear next to it: [Copy System*]. (If you touch the key again, the asterisk will disappear. Touch it several times and watch the asterisk appear and disappear, but make sure the asterisk is present before you go on to the next step.)

The asterisk must appear next to the [Copy System*] soft key if the operating system is to be copied onto the next disc while it is being formatted.

NOTE

The applications that you see on the P.A.M. screen are not part of your operating system. The only way you can copy your operating system is during the format process. The only way you can copy your applications is by using the install process which you will do in a little while.

9. Touch the [Start Format] soft key.

The message **Reading system files** will appear at the top of the screen, followed by **All system files have been read. Insert Discs to be formatted.** This means that the operating system is going to be copied to the new disc.

Having Trouble?

If something doesn't work the way you think it should, look at the top line of the screen. Often an error message will appear there to tell you what is wrong. If you don't understand the error message, look it up in the Error Message Appendix in your *Owner's Guide*.

CAUTION

All discs must be formatted before they can be used to store data. Since your Sys-Master disc, for example, has data (applications) on it, it has already been formatted and need not be formatted again.

If you format a disc that already has data on it, all of that data will be destroyed.

-
10. Make sure you have a new disc in **Drive B**, then press the **RETURN** key.

It will take the computer approximately three minutes to format the disc and copy the operating system onto it. During this time, the red light will be on under Disc Drive B. When the format procedure is over, the message "**Operation complete. Press Start Over to re-select disc(s)**" will appear at the top of the screen.

11. You may now remove the newly-formatted disc from Drive B.
12. Write "Operating System work disc" on one of the gummed labels that come with your blank discs and stick it onto your newly-formatted disc. Later, you will install your Sys-Master applications on this disc.
13. Touch the **Start Over** soft key.

If you are uncertain as to whether or not you did copy the operating system, look at the current soft keys. If **Copy System** has an asterisk, then you did copy the operating system.

Formatting a Disc Without the Operating System

Now that you have formatted one disc and copied the operating system onto it, you are ready to format more blank discs. You will not be copying the operating system onto these discs for the simple reason that the operating system takes up space — space you can use for installing applications and storing data. You only need one work disc with the operating system.

How many discs should you format?

You should, at this time, format a disc for each of your other master application discs (like APPL_MASTER and MEMOMAKER).

Some applications (like VISICALC and MEMOMAKER) create data files that you will want to store on separate discs. You should format one extra disc for each of these applications. These discs are called work discs.

To format more discs:

1. Insert a **new, blank disc** in Drive B.
2. Select and label your disc. You can give each of your discs a label up to eleven characters in length. Disc labels help you remember what you have stored on your disc.
 - a. Touch the box labelled **B** until it is no longer highlighted.
 - b. Touch the box labelled **B** again to highlight it. (This allows you to change the label so that it is not the same as the last disc's label.)
 - c. You have two choices:

Type the disc label. (The letters you type will appear at the top of the screen. Use the **Back space** key to erase characters and make corrections.) Press **RETURN**.

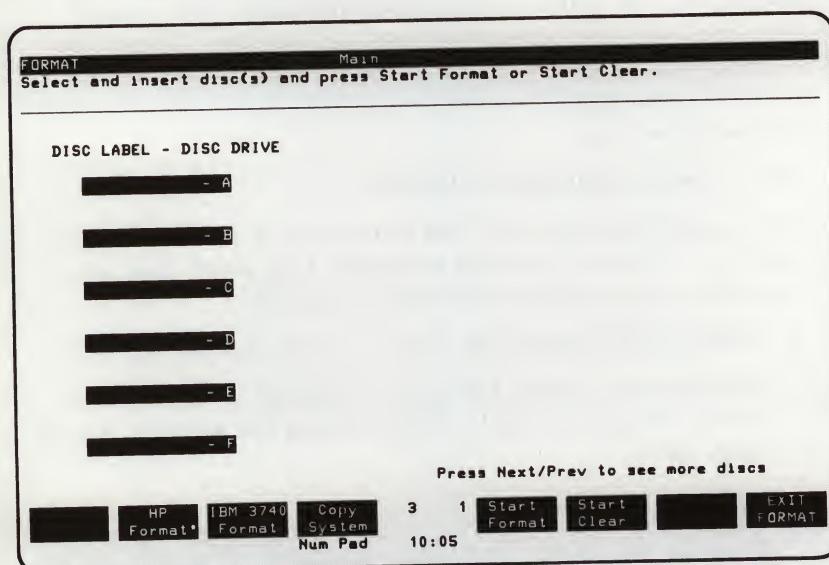
Or

Touch the **No Disc Label** key on the lower right corner of the screen, if you do not want to label your disc.

Made a Mistake?

Touched the wrong box? Changed your mind? If, after you've pressed [RETURN] or the [No Disc Label] soft key, you realize you chose the wrong box or typed in the wrong label, you can go back and change it. Just touch the highlighted box so that it is no longer highlighted. Your label will be erased and you can choose another disc drive.

3. Make sure the [Copy System] soft key does not have an asterisk (*) next to it. (If there is an asterisk, touch the [Copy System] soft key. Touching the soft key once should remove the asterisk.)



4. Touch the **Start Format** soft key.

The **FORMAT Formatting** display will now be on your screen, along with a message saying **FORMATTING DISC B**. It takes a minute or two for a disc to be formatted. When the formatting is over, the message line at the top of the screen reads, "**Operation complete. Press Start Over to re-select disc(s).**"

5. Remove the formatted disc from Drive B.
6. Touch the **Start Over** soft key to format more discs. The **FORMAT Main** menu will appear on your screen again. Remove the newly formatted disc from Drive B, and insert a new, blank disc in its place. Repeat steps 2 through 5. (Remember that you'll need one formatted disc for each application disc. You'll also need data discs on which to store the files created by applications like VISICALC and WORDSTAR.)

Or

Touch **Exit Format** if you have no more discs to format at this time.

Installing Applications onto Your Formatted Discs

An **application** is a program that performs a special function. VISICALC and WORDSTAR are applications, so are the FORMAT, DEVICE CONFIG, and MSDOS COMMANDS programs on your **Sys_Master** disc. It is very important that you duplicate your master discs. You can use these duplicate discs as 'work' discs. You then keep the original discs in a safe place.

To make duplicate discs, you use the **Install** application. When you **install** an application, you are actually making a copy of it. You **CANNOT** make a copy of an application using the COPY/BACKUP program.

NOTE

Not all applications need to be installed because they come with two master discs. Lotus 1-2-3 is an example. If such is the case, you don't need to make a duplicate.

You should install all of your programs onto formatted discs as soon as possible. Then store the master discs in a safe place.

CAUTION

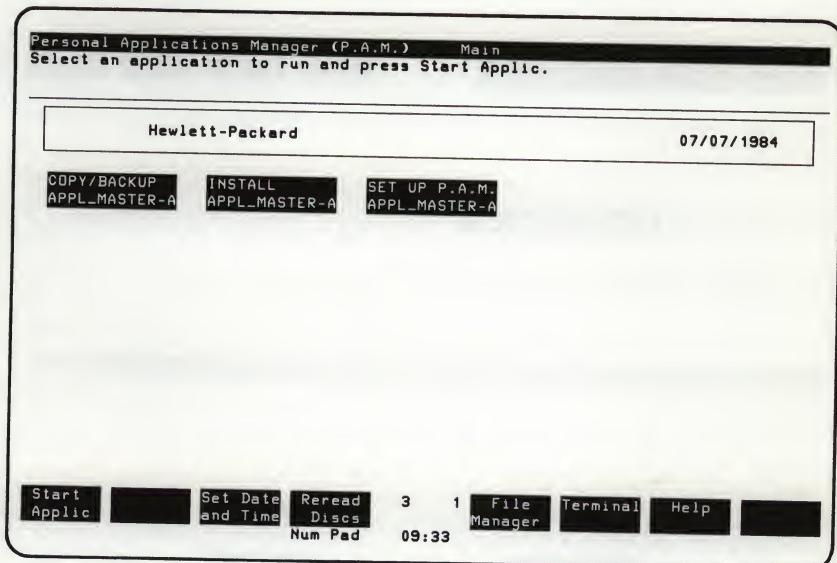
Flexible discs are very sensitive. Don't leave them anywhere where they will be exposed to excessive heat, dust, or moisture. Keep your discs away from sources of magnetism, including telephones. Read the chapter on Discs in your *Owner's Guide* for more information.

Follow these steps to install the application programs on your **Sys_Master** onto your formatted disc.

Make sure your system processor and disc drive are ON before you begin and that the **P.A.M.** menu is on your screen.

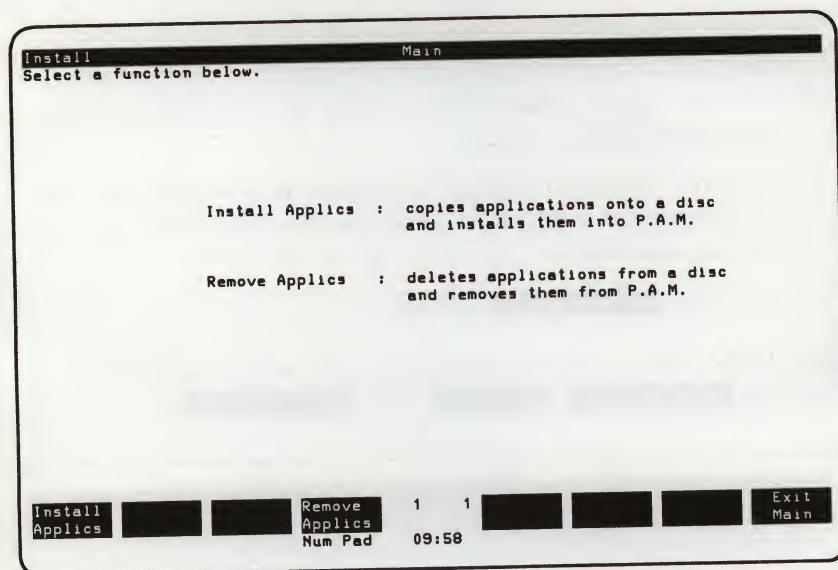
1. Insert the **Appl_Master** disc in Drive A. (You'll find it in the back of the *Owner's Guide*.)
2. Insert the formatted blank disc in Drive B. (Use the disc with the operating system on it — the one you labelled "Operating System work disc".)
3. Touch the **Reread Discs** soft key.

The **P.A.M.** menu will now appear on your screen with three options: **COPY/BACKUP**, **INSTALL**, and **SET UP P.A.M.**.



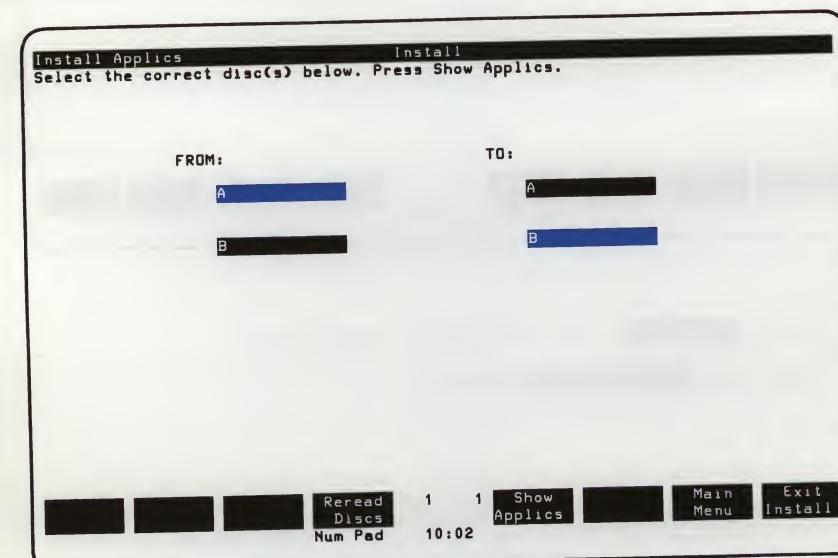
4. Touch **INSTALL**. The block will be highlighted.
5. Touch the **Start Applic.** soft key.

The screen will go blank for a few seconds, and then the **Install** menu will appear.



6. Touch the **Install Apps** soft key.

The **Install Apps** display will now be on your screen.

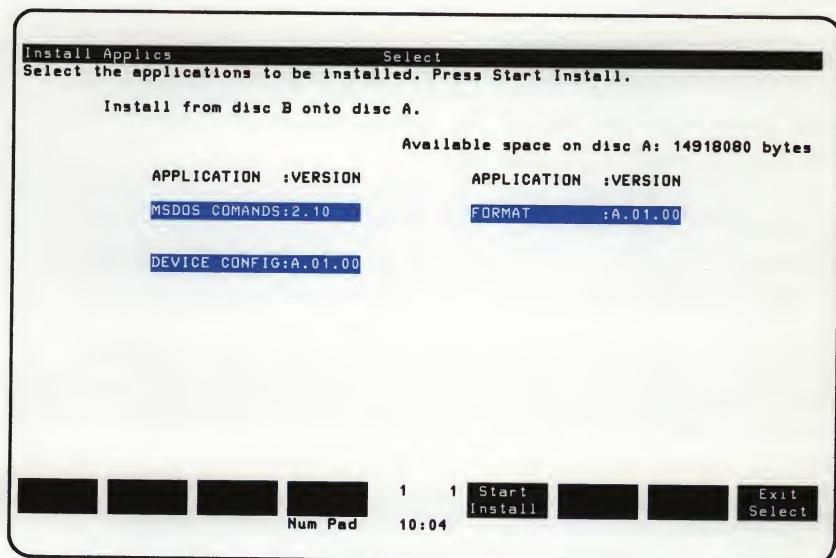


There are two columns in the middle of this display: **FROM** and **TO**. The system assumes you are going to install an application FROM the disc in A drive TO the disc in B drive. In this instance, that is what you want to do.

7. Remove the **Appl_Master** disc from Drive A.
 8. Insert the **Sys_Master** disc (or other master disc) in Drive A.
 9. Touch the **Show Apps** soft key.

A new display will appear on your screen. All the applications on your master disc in Drive A will be listed in boxes in the middle of the screen. You will be asked to select those applications you want installed. Since you are making a duplicate of this disc, you will choose all of them, as in Step 10 below.

10. Touch the names of all of the applications (for example, **MSDOS COMMANDS**, **FORMAT**, and **DEVICE CONFIG**) until they are all highlighted.



The names of all the applications should be highlighted.

NOTE

Generally, when you install applications from a master disc to a work disc, you install ALL the applications found on the master. Some application discs, like MEMOMAKER, only have one application on them; while others, like Sys_Master, have more than one.

Do not attempt to install applications from two or more discs onto one disc; they probably won't fit.

11. Touch the **Start Install** soft key.

The disc drives will click, and the red lights will blink on and off for a minute or two. As the applications are installed, the highlight will disappear. When the installation process is over, the message **Install completed** will appear at the top of your screen.

12. Touch the **Exit Select** soft key.

The **Install Applications** display asking you to select the correct discs will be on your screen again.

13. Remove the discs from both drives.

14. Write down the names of the newly-installed applications on the gummed label on the new disc.

You can now put your master disc (for example, **Sys_Master**) away. Everything on it has now been copied onto a new disc. Now you are ready to install the rest of your applications (like **Appl_Master** and **WORDSTAR**) onto new discs.

15. Insert the next disc (e.g., **Appl_Master**) into Drive A and a blank, formatted disc in Drive B, and repeat steps 9 to 14.

When you have installed all your applications, touch the **Exit Install** soft key.

Now you are ready to begin working on your HP applications! Before you start, you should put away the master (original) copies of all your application programs.

Up and Running!

Once your system is set up, starting up each day is quick and easy. You just:

1. Turn on the power switch at the rear of the display unit.
2. Insert a disc with a copy of the operating system on it in Drive A. (Remember that the duplicate disc you made of Sys_Master has the operating system on it.)
3. If P.A.M. is not on the screen, press **RESET/BREAK** while holding down the **SHIFT** key and the **CONTROL** key. (Hard Reset)
4. When you see P.A.M. on your screen, you know that the operating system is loaded into memory. At this point, you may remove the operating system disc from Drive A.
5. Insert the desired application disc in Drive A (and a data disc in Drive B, if necessary). (A data disc is a formatted work disc used to store the data created by the application. For example, you create spreadsheets with VISICALC. These spreadsheets should be stored on data discs.)
6. Touch the **Reread Discs** soft key.
7. Touch the application you want.
8. Touch the **Start Applic** soft key.

That's all there is to it!

Ending a Session

At the end of a computer session, you must:

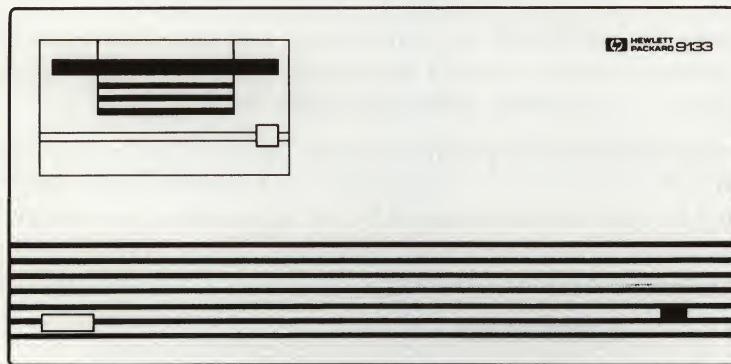
1. Remove the flexible discs from the disc drive and store them in a safe place.
2. Turn off the power switch on the system processor.

Of course, there are a lot more things you will want to know about what you can do with your computer and how you can do it. This information is found in your *Owner's Guide*.

The HP 9133V or HP 9133XV Disc Drive

Preparing the 9133 Disc Drive for Installation

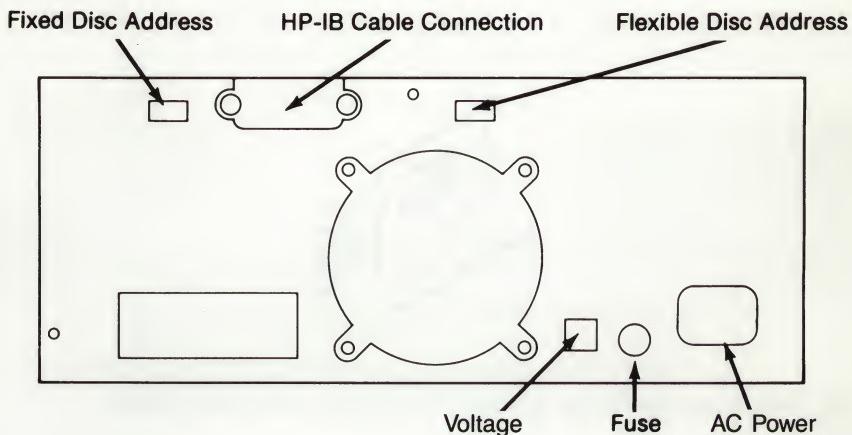
Your HP 9133V or 9133XV disc drive contains a fixed (hard) disc drive and a disc drive for flexible (floppy) discs. You will never see your fixed disc or its drive. They are built into the console. You will use your flexible drive mostly to install new applications (software) onto your fixed disc.



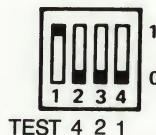
There are some steps you must perform now to save time and prevent potential data loss. These steps are listed below:

1. Make sure the **Power Switch** on the front of the disc drive is in the **OFF** position. (The power switch, marked line on most models, is pressed on and off. When the button is recessed the switch is ON, and when it sticks out, the switch is OFF.)

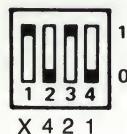
2. Turn your disc drive around so that you are looking at the rear panel.



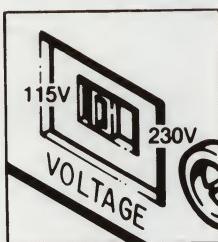
3. Check that the **address** switches for the **flexible disc drive** are set as shown below. Use a ball point pen to set the switches as shown below. (For example, the left-most switch should be **UP**.)



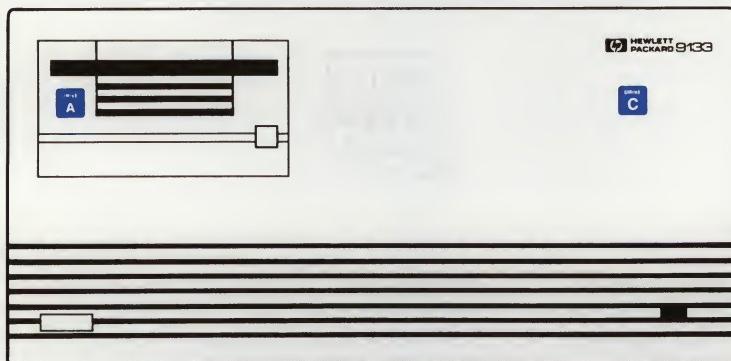
4. Check that the **address** switches for the **fixed disc drive** are set as shown below. (For example, the left-most switch should be **UP**.)



5. Make sure the **voltage** switch is set to the voltage in your area. The voltage in the U.S. is **115 VAC**, as shown in the illustration below. (To change the voltage setting, push the switch to the left with a ball point pen for 115 VAC and to the right for 230 VAC.)

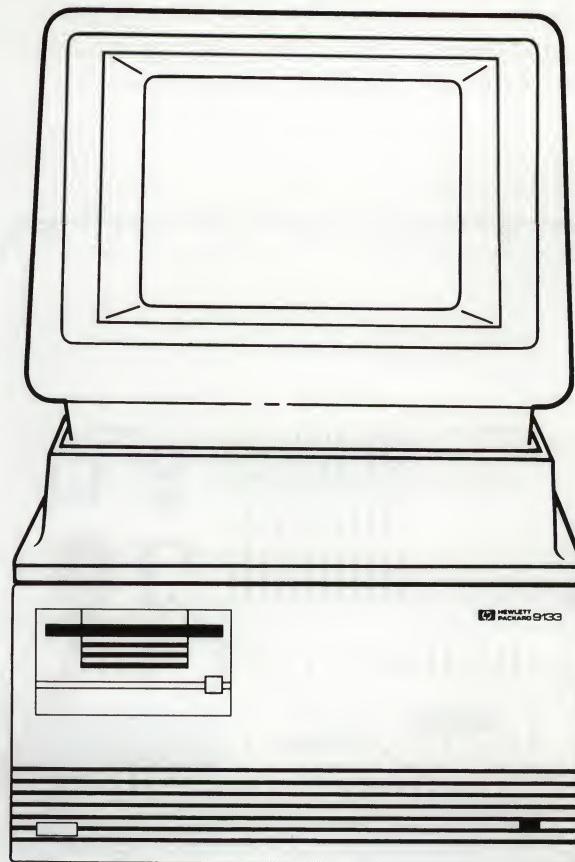


6. Turn your disc drive around, so you face the front panel.
7. Place the **A** sticker next to the **flexible** disc drive, and the **C** sticker over the **fixed** disc drive. (**A** and **C** are the 'names' the operating system will use to address the discs. Later on, after the disc drive is configured, these names will change.)

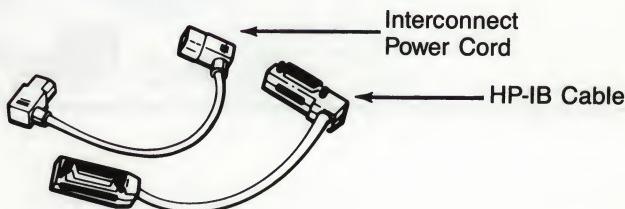


Connecting the Disc Drive to the System Processor

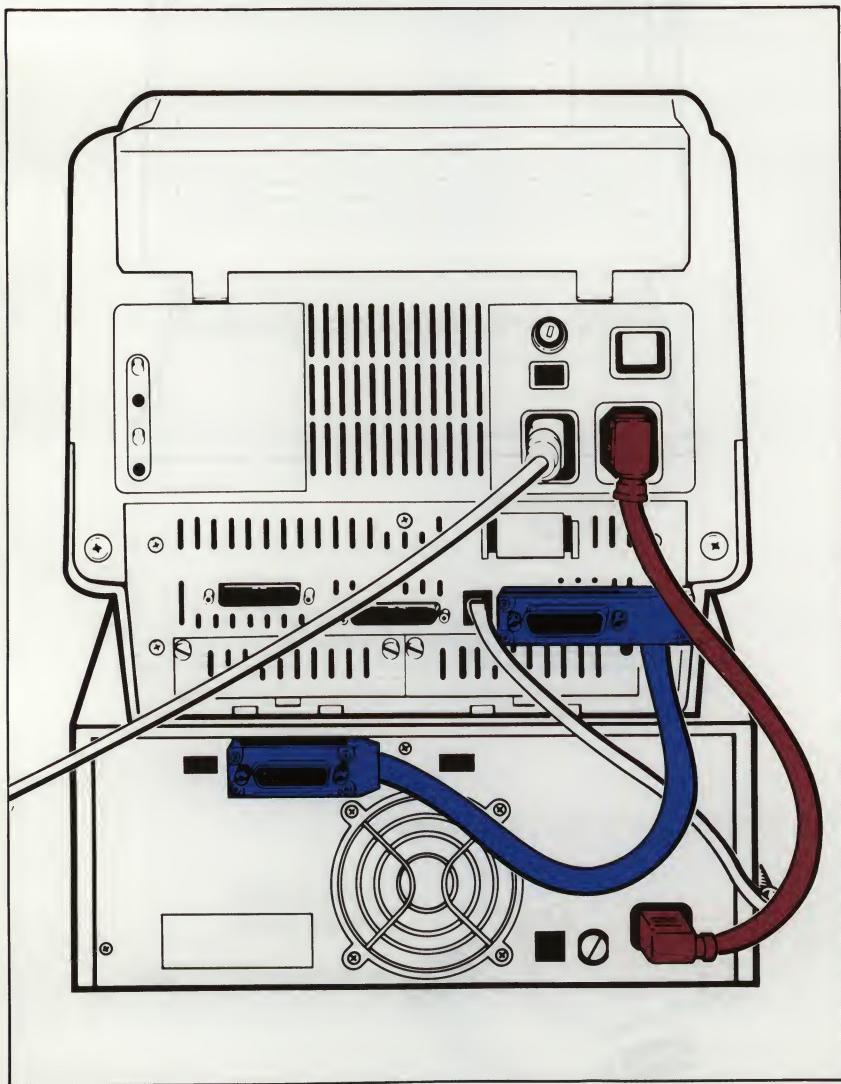
1. Place your system processor on top of the disc drive.



2. Locate the two cables pictured below.



3. Connect the HP-IB cable to the system processor and the disc drive, as shown in blue below. Notice that the cable ends are different. Use the picture to see which end goes to which plug. (The connection points are labelled on the rear panels of the disc drive and display unit.) Using your fingers, secure the cable by screwing each cable end to the connection.



4. Plug one end of the **Interconnect Power Cord** into the **AC OUTPUT** outlet on the rear panel of the system processor and the other end in the **AC LINE** socket on the rear panel of the disc drive, as shown in red in the illustration on the previous page.
5. Turn the **system processor** power switch **ON**. (Remember, it is located on the back of the display unit.)
6. Turn the **disc drive** power switch **ON**. (Press the button, marked 'line' on most models, on the front panel one or two times until the button is recessed.)

You may now hear the whirring noise of the drive and fan starting. You might also see a red light on the front of the drive.

The following message will appear on your screen:

Load Op Sys failed, Op Sys device not found
Press RETURN to clear

If Something Went Wrong

If you don't hear or see anything, check that:

- The system processor **power** switch is **ON**.
- The disc drive **power** switch is **ON**.
- The **interconnect power cord** is plugged into the **AC OUTPUT** outlet on the system processor and the **AC LINE** socket on the disc drive.
- The **electrical** outlet the system processor is plugged into is functioning. (Try plugging a lamp into the wall outlet or multiple-outlet strip.)

If you are still not getting any response from your disc drive, call the appropriate support person from the list in your *Series 100 Support Guide* (located in the front of your *Owner's Guide*).

Because you have connected the disc drive to the system processor with the interconnect power cord, your disc drive receives its power from the system processor. Leave the disc drive power switch on all of the time and turn only your system processor switch on/off. The system processor's power switch will also turn the disc drive on and off.

Printers and Plotters

You are now ready to connect your printer(s) and plotter(s). Instructions for installing HP printers and plotters are found in **Appendix A** of this booklet.

After you have connected the printer(s) and/or plotter(s) to the system processor, you must tell the computer what kind of equipment you have installed. This process is called **configuring**. But before you can configure your equipment, you need to learn a little more about how the system works.

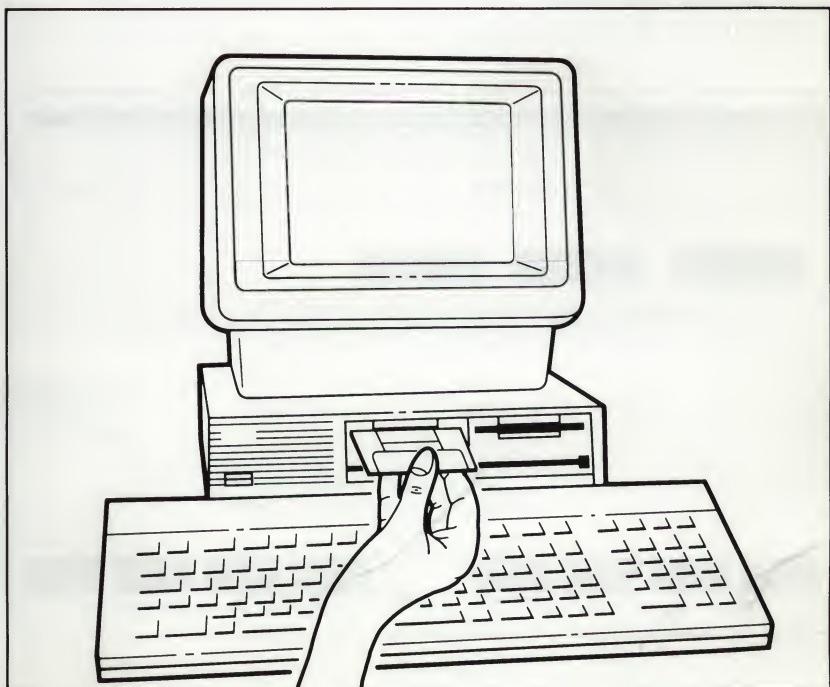
Turn to Appendix A now to install your printer(s) and plotter(s).

Loading the Operating System

Before you can use your computer, you must **load** the operating system into its memory. Later on when you format your hard disc, the operating system will load automatically every time you turn your computer on. But for now, you must use the **Sys_Master** disc found in the back of your *Owner's Guide* to get your system started.

This is how you load the operating system into computer memory:

1. Make sure system processor is **ON**. (Remember that the disc drive's power comes from the system processor, so always leave the disc drive power switch **ON**.)
2. Remove the disc labelled **Sys_Master** from the back of your *Owner's Guide*.
3. Hold the disc so that the metal auto-shutter is away from you.
4. Insert the disc into the flexible disc drive label-side up. Push the disc gently, but firmly, until it clicks into place. (To remove a disc, push the button below the drive.)

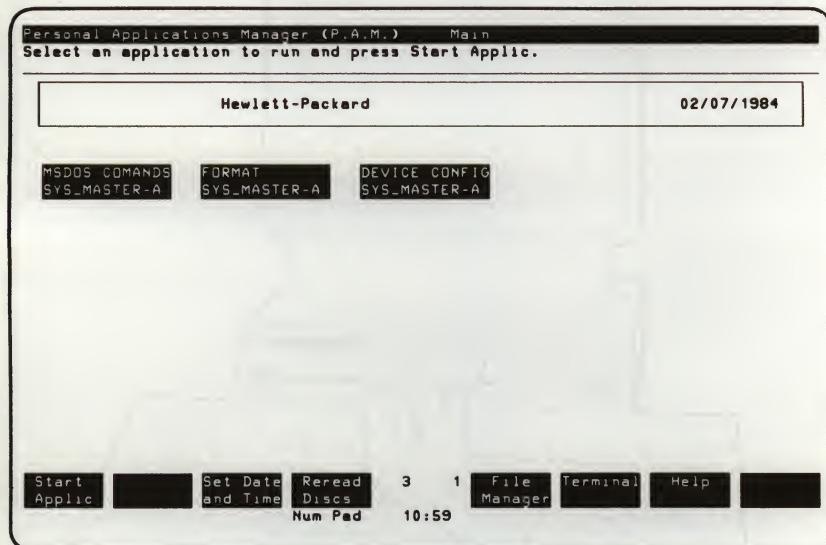


Hard Reset

To perform a Hard Reset, press the [RESET/BREAK] key while holding down the [CTRL] and [SHIFT] keys.



5. Perform a **hard reset**. This display should come onto your screen after a few seconds:



This is the **P.A.M.** main menu. P.A.M. is the Personal Applications Manager. P.A.M. makes managing your applications easy.

There are three large boxes in the center of the screen. Each box contains the name of a **P.A.M. application** found on your **Sys_Master** disc. Notice that the first box, the one saying **MSDOS COMMANDS** is highlighted. Touch the large box that is labelled **FORMAT**. (Do not touch any of the small boxes at the bottom of the screen yet.) Whatever large box you touch becomes highlighted, but only one box can be highlighted at a time.

Make a Mistake?

Did you touch the wrong box? If you touched the **Start Applic** box, you actually chose one of the applications.

If you have a blank screen with an **A>**, you are in MS-DOS Commands. To get back to P.A.M., just type **EXIT** and press **RETURN**.

If you see an unfamiliar set of soft keys, just touch the one that says **EXIT**.

If there is no **EXIT** soft key, simply perform a **hard reset**.

You may now run the **System Demo** disc found in the back of your *Owner's Guide*.

Running the Demo Disc

Now that you have loaded the operating system into the computer's memory, you can run the **Demo** disc found in the back of your *Owner's Guide*. The Demo disc shows you some of the things you can do with an HP 150 personal computer.

This is what you must do to run the Demo disc at this time: (It is assumed that you have just completed steps 1 through 3 in the last section. You should have the P.A.M. menu on the screen.)

1. Remove the **Sys_Master** disc from the flexible disc drive by pressing the gray button below the drive.
2. Insert the **System Demo** disc in the flexible disc drive.

Soft Keys and Function Keys

The eight boxes at the bottom of your screen are touch-sensitive **soft keys**. They correspond to the dark gray function keys labelled **[F1]** to **[F8]** on the top row of your keyboard. If you do not wish to activate a soft key command by touching the screen, you can press the corresponding key on your keyboard.

3. Touch the **Reread Discs** soft key at the bottom of the screen.
The screen will go blank for a few seconds, then a new **P.A.M.** menu will appear.
4. Touch the box that says **System Demo** until it is highlighted.
5. Touch the **Start Applic** soft key at the bottom of your screen.

The screen will go blank for a few seconds while the Demo is being loaded into the computer. Then the demonstration will begin. Keep in mind that the second line of the screen is reserved for directions and error messages. If nothing seems to be happening, it could be that the computer is waiting for you!

CAUTION

Never remove a disc from the disc drive while the red light is on.

When you are through viewing the demonstration, you may remove the disc from the disc drive.

Formatting the Fixed Disc

Always before you use a new, blank disc for the first time, you must format it. Formatting is the process of preparing a blank disc to store data.

You use information found on your **Sys_Master** disc to format your fixed disc. At the same time that you format your disc, you will be putting your operating system onto it. This is the first step of a process that will allow you to boot (start) your system without inserting the **Sys_Master** disc.

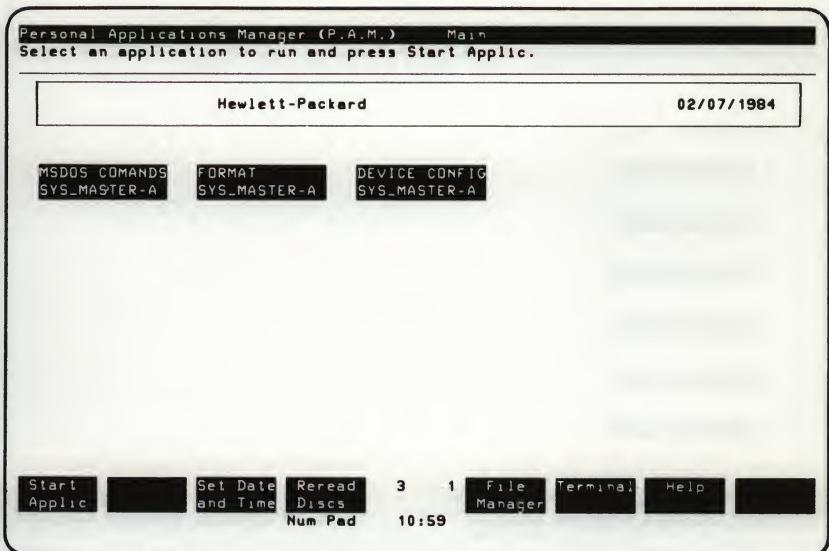
The formatting procedure may take up to 30 minutes.

CAUTION

If you format a disc that already has data on it (programs, applications, etc.), the data will be destroyed during the format process.

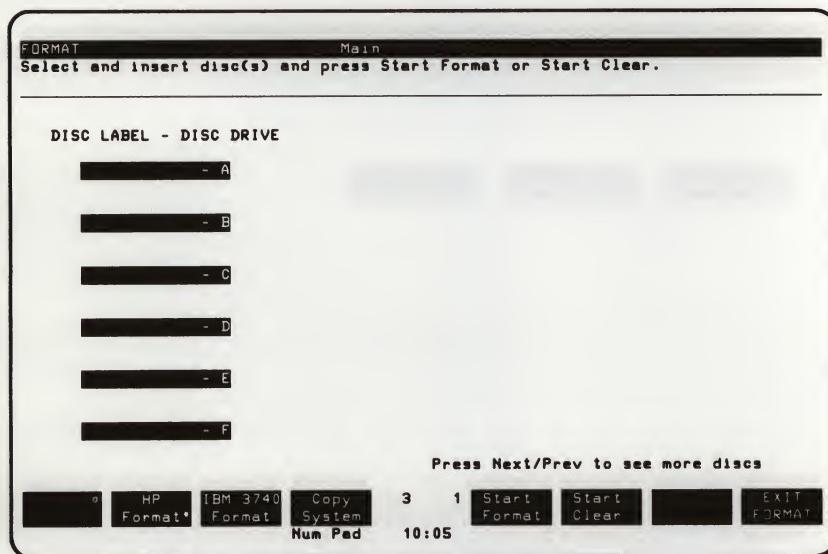
1. View the **P.A.M.** main menu. If it isn't on your screen, follow these steps:
 - a. Make sure your system processor is ON. (Remember that your disc drive is powered by the system processor if you leave the disc drive power switch on all of the time.)
 - b. Insert the **Sys_Master** disc in Drive A.
 - c. Perform a **hard reset**.

The P.A.M. main menu will now be on your screen. The boxes in the center of the screen tell you the names of the applications on the **Sys_Master** disc.



2. Touch the screen where it says **FORMAT
SYS_MASTER-A**
3. Touch the soft key labelled **Start Applic** at the lower left corner of the screen.

The **Loading Format** message will now appear on the top line of your screen. The following display will soon appear on your screen.



This is the **FORMAT** main menu.

Made a Mistake?

Did you choose the wrong box? If you touched the **MSDOS COMMANDS** box, the **A>** prompt appeared on your screen. To return to the Main P.A.M. menu, just type in the word **EXIT** and press the **RETURN** key.

If you touched the **DEVICE CONFIG** box, touch the **Exit CONFIG** soft key at the far right corner of the screen and return to the Main P.A.M. menu.

If you touched the wrong soft key, touch the **Exit** soft key on the far right of the screen to return to the main menu. If there is no exit key, perform a hard reset.

The format main menu lists many disc drives. You have two. Your flexible disc drive at this time is **Drive A** and your fixed disc drive is **Drive C**. (This is why you placed the A and C stickers on your disc drive.)

4. Touch the box labelled **C**. (The box will be highlighted.)
5. Touch the **No Disc Label** soft key on the lower right corner of the screen.

Made a Mistake?

Pressed the wrong box? If, after you've pressed the **No Disc Label** soft key, you realize you chose the wrong box, you can go back and change it. Just touch the highlighted box so that it is no longer highlighted. Then touch the box for Drive **C**.

6. Touch the **Copy System** soft key. An asterisk (*) will appear next to it: **Copy System***. (If you touch the key again, the asterisk will disappear. Touch it several times and watch the asterisk appear and disappear, but make sure the asterisk is present before you go on to the next step.)

When the asterisk (*) appears next to the **Copy System** soft key, the operating system will be copied onto the new disc while it is being formatted.

7. Touch the **Start Format** soft key.

The message **Reading system files** will appear at the top of the screen, followed by **All system files have been read. Insert Discs to be formatted**. Of course, the disc you want to format is your fixed disc, and it's always in the drive.

Having Trouble?

If something doesn't work the way you think it should, look at the top line of the screen. Often an error message will appear here to tell you what is wrong. If you don't understand the error message, look it up in the Error Message Appendix of your *Owner's Guide*.

CAUTION

The formatting process cannot be halted quickly once it has begun. Before you perform the next step, be prepared to wait for up to 30 minutes while your fixed disc is formatting. **Absolutely do not turn the disc drive off during the format process or you may damage your fixed disc.**

8. Press the **RETURN** key.

The formatting operation will now begin. Remember, it will take your computer up to half an hour to complete the formatting operation.

When the disc is formatted, you will see the following message at the top of your screen: **Operation Complete. Press Start Over to re-select disc(s).**

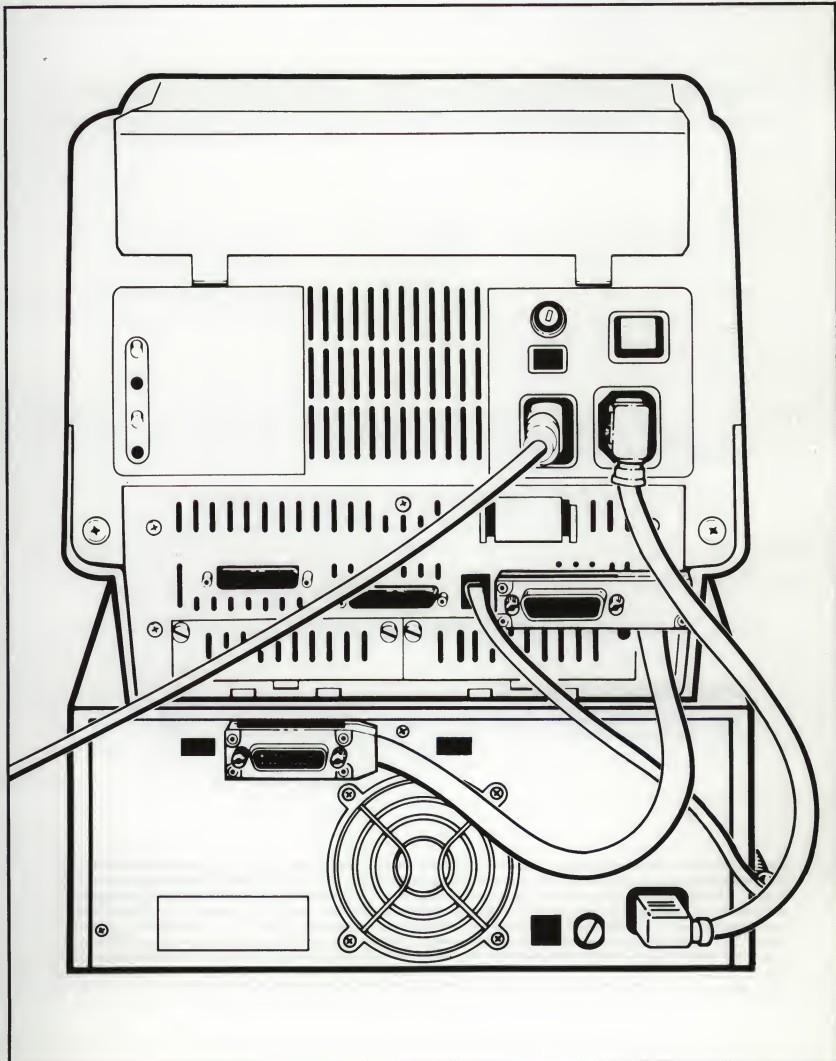
9. Press the **EXIT FORMAT** soft key.

The next task is to tell your system processor what disc drive (model 9133) you have connected to it. This is covered in the next section.

Configuring the Disc Drive

Now that you have formatted your fixed disc and copied the operating system onto it, you must make some changes to your system. **Configuring** your disc drive just means telling the operating system specifically where the disc drive is. You will also, at this time, have to **change** the **address switches** on the rear panel of your disc drive.

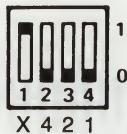
1. Turn your system around so that you are facing the rear of your disc drive and system processor.



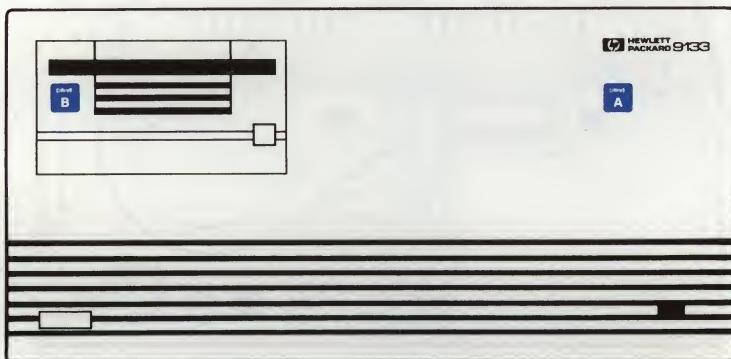
2. Turn **OFF** the system processor. (The power switch is on the rear panel of the display unit.) This will also turn off the disc drive.
3. Change the **flexible disc address** with a ball point pen so that it matches the example below. (For example, the left-most switch should be **UP**.)



4. Change the **fixed disc address** with a ball point pen so that it matches the example below. (For example, the left-most switch should be **UP**.)



5. Turn your system processor and disc drive around so that you are facing the front.
6. Remove the **A** and **C** stickers from your disc drive.
7. Place the **A** sticker over the fixed-disc drive and the **B** sticker over the flexible-disc drive.



Now that you have changed the address settings on the back of your disc drive, you are ready to configure your system.

1. Turn the system processor ON. (When you turn the system processor ON, the disc drive should also go ON. If it does not, check to see that the ON/OFF button is pressed-down and that the Interconnect Power Cord is securely connected.)
2. Insert the **Sys_Master** disc in the flexible-disc drive (the one you just labelled B).
3. Touch the **Reread Discs** soft key. The P.A.M. menu will appear on your screen with a list of applications to choose from.
4. Touch the **DEVICE CONFIG** box until it is highlighted.
5. Touch the **Start Applic** soft key. The **MS-DOS Device Configuration** menu will now appear on your screen.

MS-DOS Device Configuration						Main			
System Devices									
PRN:	HP-IB	Address	Model	Print Wheel	PLT:	Interface Address			
LST:	Port2		82906A		COM1:	Port2			
AUX:	Remote		2602A	USASCII	COM2:	Remote			
Disc Drives									
A:	HP-IB	0	0	E: No Device	I: No Device	Interface Addr Drive			
B:	HP-IB	0	1	F: No Device	J: No Device				
C:	HP-IB	2	0	G: No Device	K: No Device				
D:	No Device			H: No Device	L: No Device				
Previous Choice			Next Choice	Save Config	Default Values	Active Values	Num Pad	12:00	Exit CONFIG

The top half of the screen is devoted to System Devices and the bottom half to Disc Drives. You will only have to look at the Disc Drive part of the screen now.

Notice that there are **Interface**, **Address**, and **Drive** columns. In the picture below, you will see what the screen for your disc drive should look like. To change your screen to match the one in the picture:

- a. Touch the **B: Address** box so that it is highlighted.

B: **HP-IB** **0** **1**

- b. Touch the **Next Choice** soft key until a **2** appears in the highlighted box as shown below.

B: **HP-IB** **2** **1**

- c. Touch the **Drive** box for **B:** so that it is highlighted.

B: **HP-IB** **2** **0**

- d. Touch the **Previous Choice** soft key until a **0** appears in the highlighted box.

B: **HP-IB** **2** **0**

- e. Touch the **C: Interface** box so that it is highlighted.

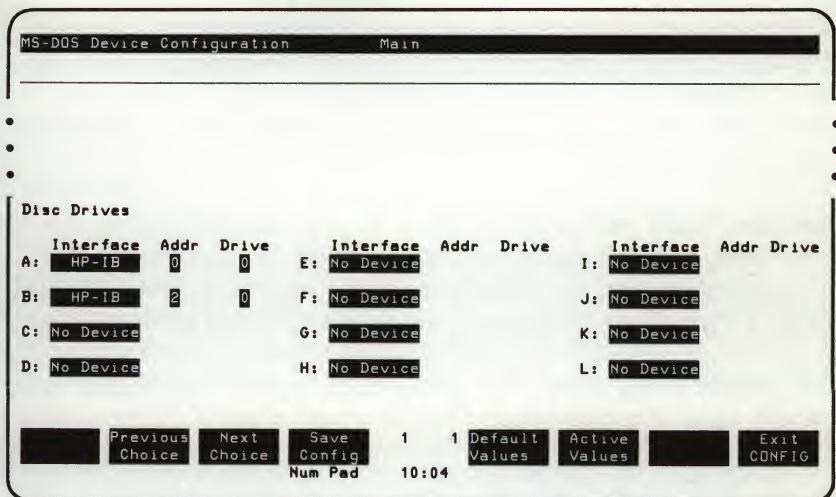
C: **HP-IB** **2** **0**

- f. Touch the **Next Choice** soft key until **No Device** appears in the highlighted box.

C: **NO DEVICE**

- g. Touch the **Save Config** soft key. The message **Device Configuration has been saved** will appear at the top of the screen.

Your disc drive configuration should look exactly like this:



Make sure your screen looks exactly like the one above, and that you have touched the **Save Config** soft key before you go on to the next step.

Made a Mistake?

You can change the Device Configuration menu at any time. Just touch the box you want to alter and then touch the **Previous Choice** or **Next Choice** soft key. You can touch these boxes and keys as many times as you want until you get the right combination.

6. Touch the **Exit CONFIG** soft key. You will return to the P.A.M. menu.

Configuring Printers and Plotters

Now you are ready to configure your printers and plotters. Turn to Appendix B of this booklet to learn how.

Installing Applications Onto Your Fixed Disc

An **application** is a program that performs a special function. VISICALC and WORDSTAR are applications, so are the FORMAT DEVICE CONFIG, and MSDOS COMMANDS programs on your **Sys__Master** disc. To make these applications easier to use and to protect the master copy, you will want to **install** these applications onto your fixed disc.

You can **install** your applications as soon as you have formatted your fixed disc and configured your disc drive. When you install an application, you are actually making a copy of it. You **CANNOT** make a copy of an application using the COPY/BACKUP program.

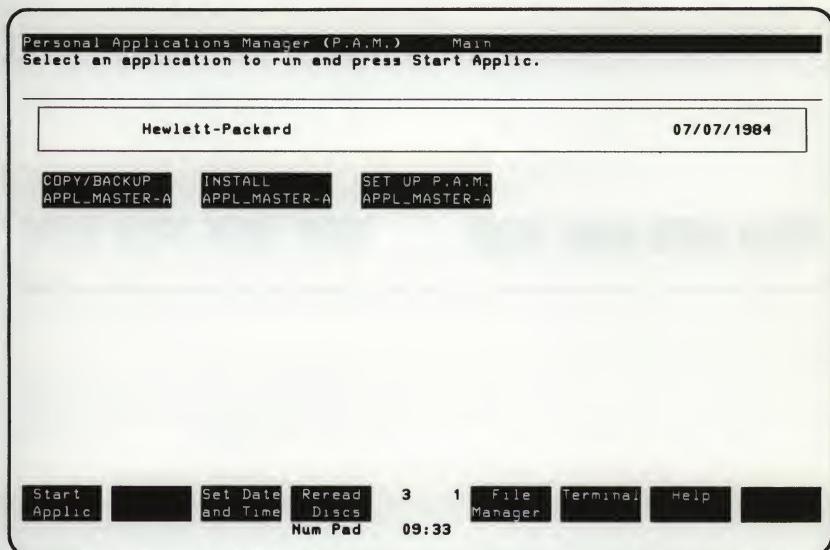
You should install all of your applications as soon as possible. You should then store the master discs in a safe place.

CAUTION

Flexible discs are very sensitive. Don't leave them anywhere where they will be exposed to excessive heat, dust, or moisture. Keep your discs away from sources of magnetism, including telephones.

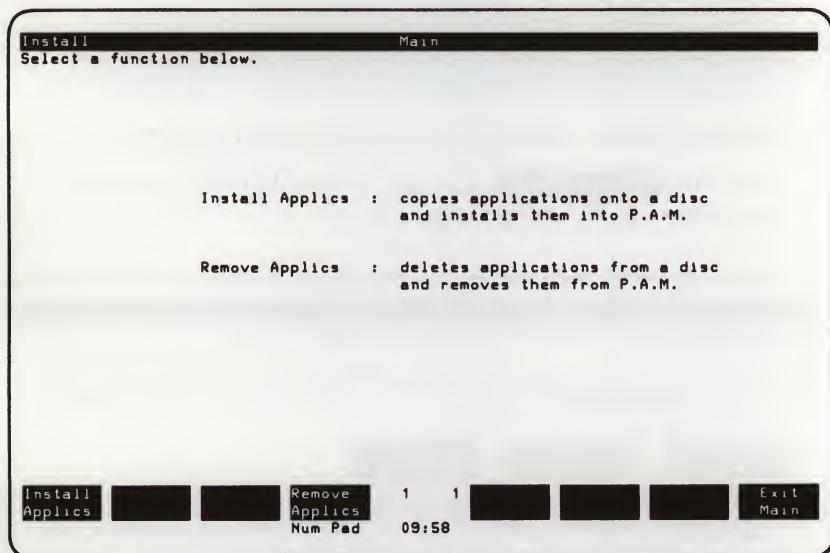
Follow these steps to install the **Sys_Master** application programs onto your fixed disc:

1. Start with the **P.A.M.** menu on your screen.
2. Locate the **Appl_Master** disc in the back of your *Owner's Guide*. (It has the Install application on it.)
3. Insert the **Appl_Master** disc in the flexible-disc drive.
4. Touch the **Reread Discs** soft key. A new **P.A.M.** menu will now appear as illustrated below.



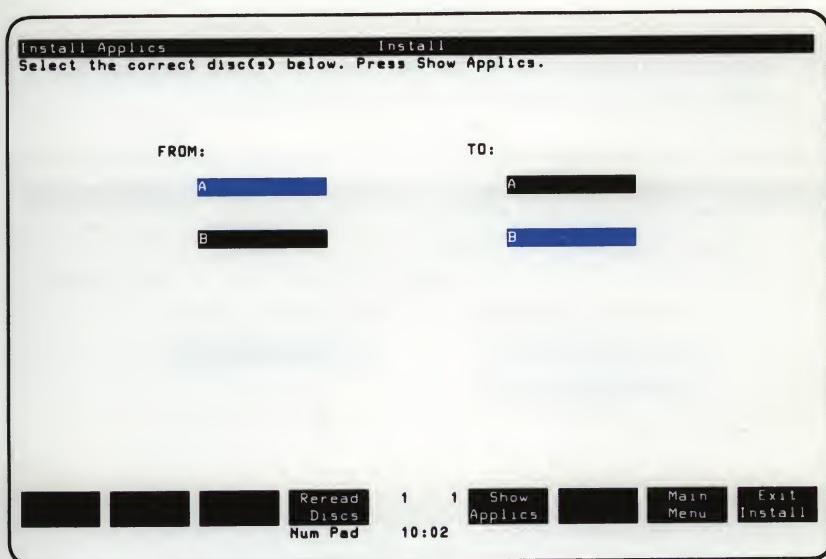
5. Touch **INSTALL** until the box is highlighted.

6. Touch the **Start Applic** soft key. The screen will go blank for a few seconds, and then the **Install** main menu will appear.



7. Touch the **Install Apps** soft key. (Note that the middle of the screen is not a choice, only an explanation. Choices must be made using the soft keys.)

The **Install Apps** Install display will now be on your screen.



There are two columns in the middle of this display: **FROM** and **TO**. The system assumes you are going to install an application from the disc in **A** drive onto a disc in **B** drive. But this is not the case here. Remember, your flexible disc is in **B** drive and your fixed disc is in **A** drive.

8. Touch the **B** box in the **FROM** column so that it is highlighted.
9. Touch the **A** box in the **TO** column so that it is highlighted.

FROM:

A
B

TO:

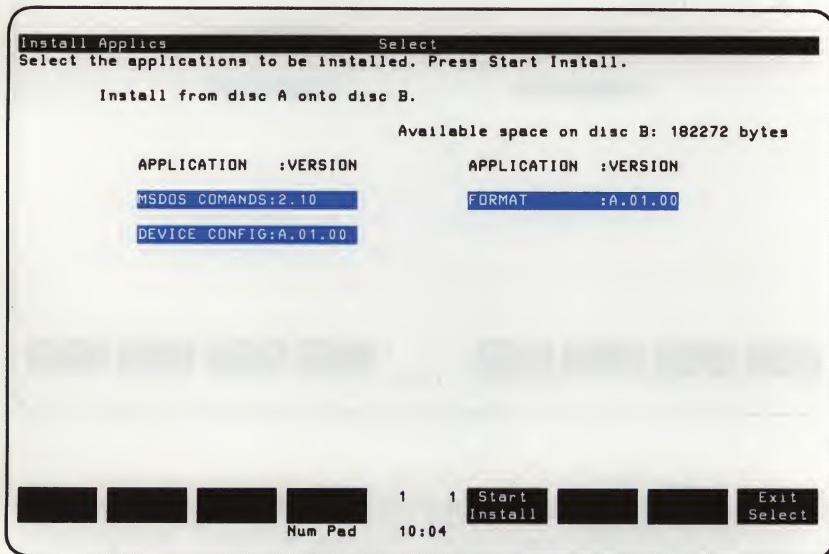
A
B

10. Remove the **Appl_Master** disc.
11. Insert **Sys_Master** (or other master disc) in the flexible drive.

12. Touch the **Show Apps** soft key.

A new display will appear on your screen. All the applications on your master disc will be listed in boxes in the middle of the screen. You will be asked to select those applications you want installed. Since you are going to duplicate your applications onto the fixed disc, you will choose all of them.

13. Touch the names of all of the applications until they are all highlighted. (Sys_Master is illustrated below.)



NOTE

Generally, when you install applications from a master disc to a fixed disc, you install ALL the applications found on the master. Some application discs, like MEMOMAKER, only have one application on them; while others like Sys_Master have more than one application.

14. Touch the **Start Install** soft key.

The disc drives will click, and the red lights will blink on and off for a minute or two. As the applications are installed, the highlight will disappear. When the installation process is over, the message **Install completed** will appear at the top of your screen.

15. Touch the **Exit Select** soft key. The **Install Applications** display will appear on your screen again.
16. Remove the master disc from the flexible disc drive and put it away. Everything on this master disc has now been copied onto your fixed disc.

Now you should duplicate your other master discs. You should duplicate your **Appl_Master** disc second and your other application discs (like MEMOMAKER) after that.

17. Insert the next master disc (for example, **Appl_Master**) in the flexible disc drive.
18. Touch the **B** box in the **FROM** column and the **A** box in the **TO** column so that they are highlighted as illustrated below.

FROM:



TO:



19. Repeat steps 12 to 16.

20. Touch the **Exit Install** soft key when you have installed all of your applications onto the fixed disc.

Now you are ready to begin working on your applications! Before you start, you should put away the master (original) copies of all your application programs.

Using the Computer Tutor

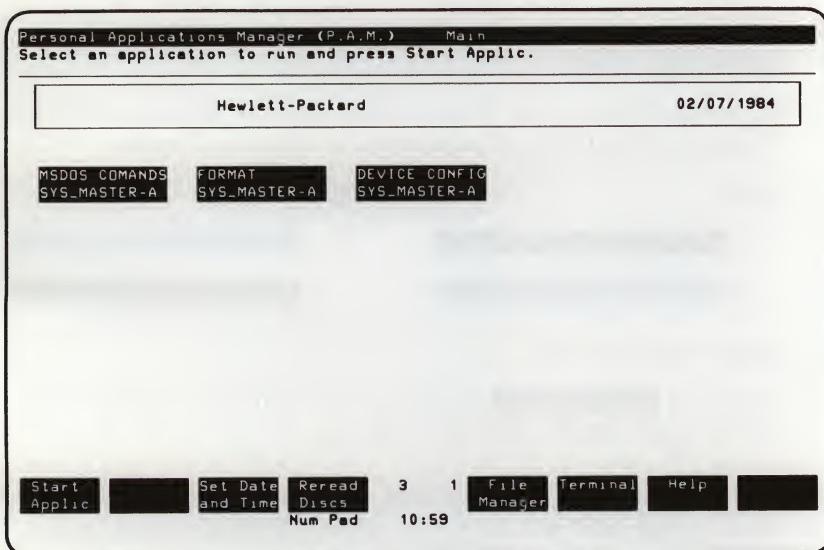
The two Computer Tutor discs found in the back of your *Owner's Guide* help you learn how to use the HP 150. The tutorial discs are labelled **Computer Tutor 150 Disc A** and **Computer Tutor 150 Disc B**. The discs also have a version number. Only version 1.2 and higher will work on the 9133 drives.

Running the Computer Tutor

To run the Computer Tutor:

1. Set the **power** switch on the back of your system processor to **ON**. (Remember that your disc drive's power comes from your system processor, but no power will come to the disc drive unless the disc drive's power switch is also on.)

The **P.A.M.** menu will now appear on your screen.



2. Touch the **MSDOS COMMANDS** box in the center of the screen.
3. Touch the **Start Applic** soft key. The following will appear on your screen:

Command v. 2.10
A >

CAUTION

You must type all Computer Tutor commands from the A > prompt as illustrated in these steps. If you do not type the commands as shown here, you may make Computer Tutor unusable.

4. Insert **Computer Tutor Disc A** in the flexible disc drive.
5. Type **B:PRETUTOR** as shown in blue below.

A > **B:PRETUTOR**

6. Press the **[RETURN]** key. The computer will begin copying the Computer Tutor disc onto your hard disc. This process takes approximately two minutes to complete.

Made a Mistake?

If you get an error message under the A > that reads **Bad Command or file name**, make sure that you typed the **B:PRETUTOR** command correctly (without typos) and make sure that you have the correct disc in Drive A.

CAUTION

Once the copying process begins, do not remove the Computer Tutor disc until the **OPERATION COMPLETED** message appears on your screen.

This operation is completed when the following appears on your screen:

A> .Operation Completed
A>
A>

7. Remove **Computer Tutor Disc A** from your flexible disc drive.
8. Insert **Computer Tutor Disc B** in your flexible disc drive.
9. Type **B:TUTOR** as shown in blue below:

A>**B:TUTOR**

10. Press the **RETURN** key.

The red disc-drive light will go on, and the drive will make a whirring sound for around 30 seconds. Then the **Computer Tutor** program will appear on your screen.

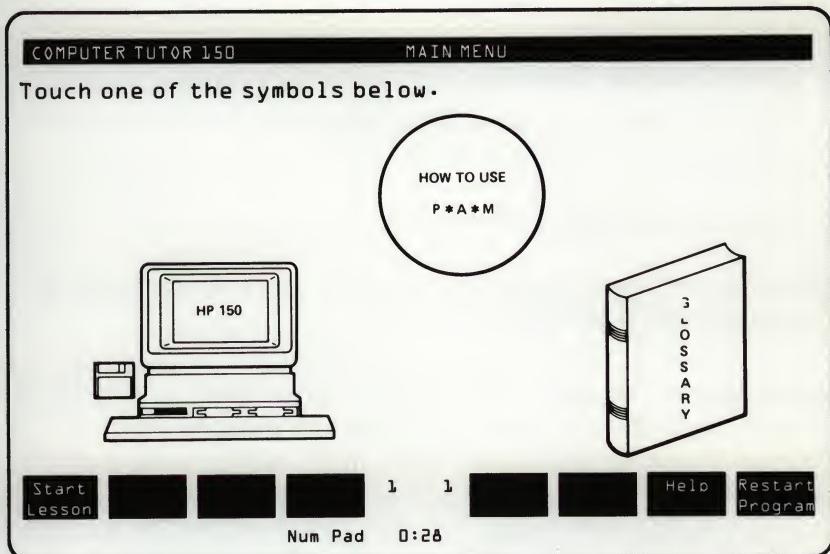
When you use the Computer Tutor, you will notice that on some screen displays you must touch a picture or word on the screen to move to the next display. In other cases, you will be asked to touch one of the **soft keys**.

Notice that the name of the display (**Introduction or Main Menu**) appears at the top of the screen, and often special instructions or error messages appear on the second line.

Ending a Computer Tutor Session

When you wish to end a Computer Tutor session:

1. Touch the **Main Menu** soft key so that the Computer Tutor main menu appears on your screen. (If there is no **Main Menu** soft key on the screen, touching **Hardware Menu** or **P.A.M. Menu** soft key will get you to a set of soft keys that show **Main Menu**.) The **Main Menu** is pictured below.



2. Press the **esc** key. (It's on the left side of the keyboard next to the **SHIFT** key.) The **P.A.M.** main menu will appear on your screen.
3. Remove the **Computer Tutor** disc from your flexible drive.

Running the Computer Tutor Again

If you want to use the Computer Tutor again:

1. Start from the P.A.M. menu.
2. Touch the **MSDOS COMMANDS** box.
3. Touch the **Start Applic** soft key. The following will appear on the screen.

Command v. 2.10

A >

4. Insert **Computer Tutor Disc B** in the flexible drive.

5. Type **B:TUTOR** as shown in blue below.

A > B:TUTOR

6. Press the **RETURN** key.

When you are ready to end the Computer Tutor session, look at the instructions in the previous section.

Removing the Computer Tutor from the Fixed Disc

At some time you may wish to remove the Computer Tutor program from your fixed disc. Follow these steps to erase the program:

1. Start at P.A.M. main menu.
2. Touch the **MSDOS COMMANDS** box.
3. Touch the **Start Applic** soft key. The following will appear on the screen.

Command v. 2.10

A >

4. Insert the **Computer Tutor Disc B** in the flexible drive.

5. Type **B:TUTOROUT** as shown below.

A > B:TUTOROUT

6. Press the **RETURN** key. A number of commands will automatically appear on the screen (like **A>DEL A:C0.SYS**). When the Computer Tutor has been removed from the fixed disc, the following will appear on the screen.

A >

A >

7. Remove the **Computer Tutor** disc from the flexible drive.
8. Type **EXIT** as shown in blue below.
A>EXIT
9. Press the **[RETURN]** key. The **P.A.M.** main menu will appear on your screen again.

Up and Running!

Now that you have copied your operating system and installed your applications onto the fixed disc, you are ready to begin work.

Once your system is set up, starting up each day is quick and easy. You just:

1. Turn on the system processor (remember that the disc drive switch should **always** be on).
2. Point your finger at an application.
3. Touch the **[Start Applic]** soft key.

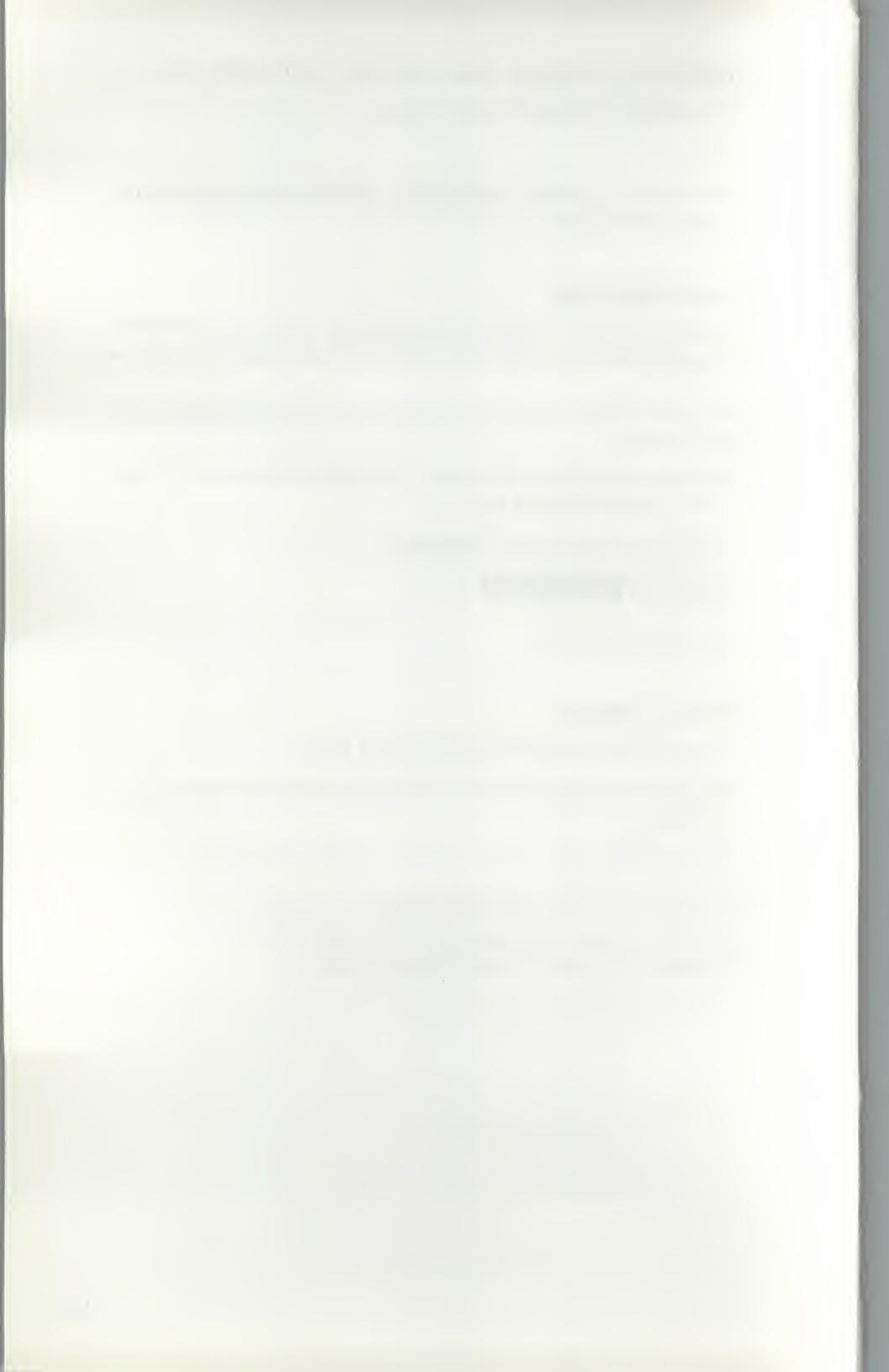
That's all there is to it!

Ending a Session

At the end of a computer session, you must:

1. Remove the flexible disc from the disc drive and store it in a safe place.
2. Turn off the power switch on the system processor.

Of course, there are a lot more things you will want to know about what you can do with your computer, and how you can do it. This information is found in your *Owner's Guide*.



Appendix A

CONNECTING YOUR PRINTER AND/OR PLOTTER

Introduction

In this appendix you will find important information not included in your *Owner's Guide* on the installation of the following printers and plotters:

- HP 2601A Daisywheel serial printer
- HP 2602A Daisywheel serial printer
- HP 2674A Internal thermal printer
- HP 293X* Serial dot matrix printer
- HP 82905B Serial dot matrix printer
- HP 82906A Serial dot matrix printer
- HP 7470A Plotter
- HP 7475A Plotter

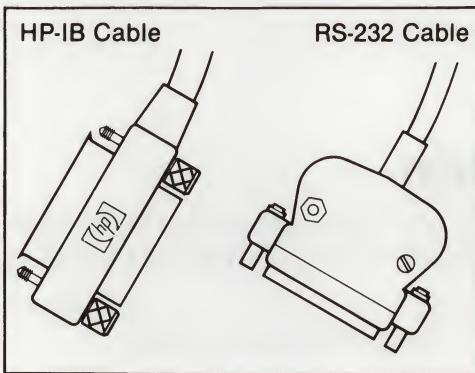
If you have a different printer or plotter, contact your dealer or HP representative for installation information.

If you have an internal printer (model 2674A), there are no special cables, so go to the next installation section of this appendix.

*HP 2932A, HP 2933A, and HP 2934A

If you have a plotter or a printer other than an HP 2674A, your printer or plotter requires a **power cord** and a **cable** that transmits data. Before you try to connect your printer or plotter, make sure you have the right **data cable**. There are two kinds of cables for connecting your printer or plotter; you must have the right cable for your unit.

The two kinds of cables are the **HP-IB cable** and the **RS-232 C** serial cable.



As you can see, these cables are very different. Furthermore, the internal wiring of an **RS-232 C** cable can vary. It is very important that you have the right **version** of the RS-232 cable (HP Part No. 13242 G).

Installation

The following chart tells you what pages to turn to in your **HP 150 Personal Computer Owner's Guide** to connect your printer or plotter.

NOTE

Pay special attention to the comment column — it provides special cable information and corrects some errors in the *Owner's Guide*.

For further information on installation, refer to the manual that comes with your printer or plotter.

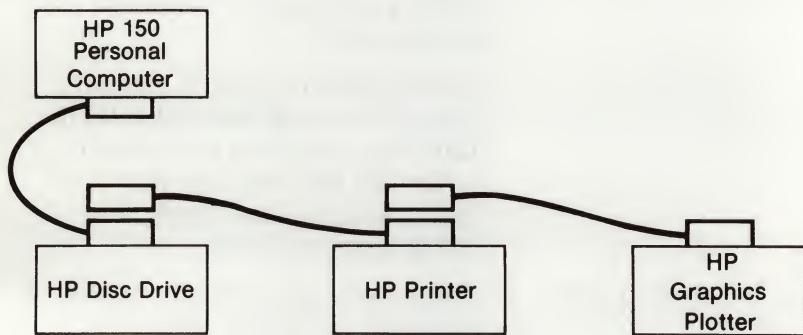
HP Printer	Owner's Guide Pages	Comment
Printer connections:		
2601	2-43 to 2-47	RS-232 cable
2602	2-49 to 2-53	RS-232 or HP-IB cable — depending on printer interface. The switch settings on page 2-53 are incorrect. Only switch 3 should be on the left. All other switches should be on the right. The switch settings for the RS-232 cable are correct.
2674A	2-55 to 2-62	The LED is the green light on the 2674A printer next to where the cable is connected. If the printer is installed without paper, the words SYSTEM ERROR 0200 may appear on your screen when you turn the computer on. Press RETURN to clear screen, and install paper to correct.
293X	2-63 to 2-68	Use correct cable: RS-232 or HP-IB. Note that the switch setting is different for each cable.
82905B	2-69 to 2-75	Use correct cable: RS-232 or HP-IB.
82906A	2-77 to 2-80	HP-IB cable.
Plotter connections:		
7470A	2-83 to 2-86	Use correct cable: RS-232 or HP-IB. Note that the illustration on page 2-83 shows the switches as seen from the FRONT of the plotter.
7475A	2-87 to 2-91	Use correct cable: RS-232 or HP-IB. Note that the illustration on page 2-83 shows the switches as seen from the FRONT of the plotter.

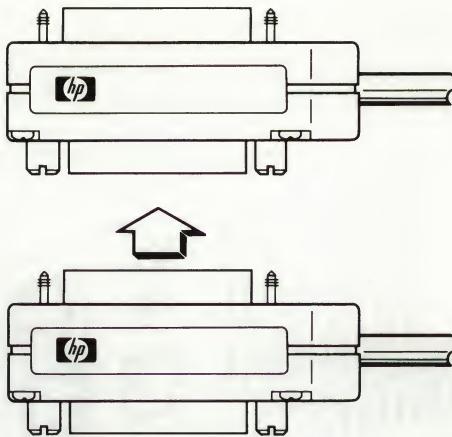
How To Connect the Data Cables

These cable installation instructions are meant to be used WITH the printer installation section in your *HP 150 Personal Computer Owner's Guide*. There are certain steps that are listed in your *Owner's Guide* which you MUST perform before you connect these cables.

HP-IB Cables:

If you are using an HP-IB cable for your printer/plotter, connect that cable to the top of the HP-IB cable you attached to your disc drive. If you have a printer and a plotter and they both have HP-IB cables, piggy-back them as shown in the picture on the opposite page.

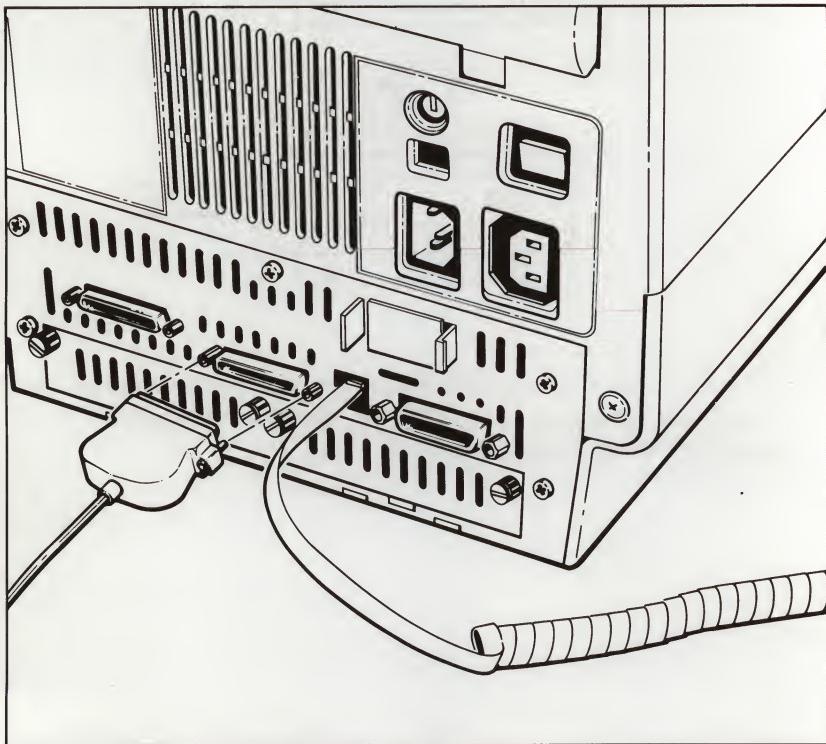




If you have more than one **HP-IB** printer, the switch settings and configuration settings will be different. Refer to your printer manual for further information.

RS-232 Cables:

If your printer uses an RS-232 cable, connect it to **datacomm port2** on the back of your system processor.



In the picture above you see an **RS-232** cable connecting a printer to the **datacomm port2** on the rear panel of the system processor.

Normally, you should have only one printer connected to your system with an **RS-232** cable. If you need two printers, you may connect one printer using an **RS-232** cable and another using an **HP-IB** cable.

If you have further questions, refer to your printer or plotter manual after you have connected your printer or plotter to your system processor. Then return to the section in this booklet relating to your disc drive.

If you have a 9121D disc drive, turn to page 4-9.

If you have a 9133V or 9133XV disc drive, turn to page 4-39.

Appendix B

CONFIGURING YOUR PRINTER AND/OR PLOTTER

Introduction

You have configured your disc drive so that your operating system knows that the disc drive is there. The operating system, however, does not know what printer(s) or plotter is connected.

There are a few more choices involved with configuring your printer(s) and plotter. These choices depend upon the type of equipment you have, so not all the choices may be applicable to you.

Read the heading of each of the following sections and if it reflects the type of printer or plotter you have, then follow the instructions in that section. Skip those sections that refer to equipment you don't have.

For example, everyone with a printer should follow the instructions in the first section.

If You Have a Printer

If you have a printer, you must first tell the system processor what printer is connected to it. (This is different from telling the operating system. We will do that later.)

1. Start from the P.A.M. menu. (If P.A.M. is not on the screen, then perform a hard reset.)
2. Touch **MSDOS COMMANDS** until it is highlighted. (This application was originally on your Sys_Master disc.)
3. Touch the **Start Applic** soft key. The following will appear on the screen after a few seconds:

```
Command v. 2.10  
A>
```

NOTE

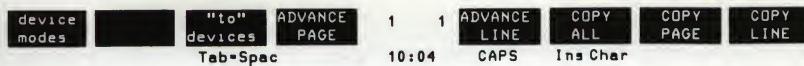
If you have a model 9133 disc drive, the Sys_Master disc is in Drive B. Therefore, you will see the following:

```
Command v. 2.10  
B>
```

4. Locate the **User System** key on the top row of keys on the keyboard. It is in the middle of the dark gray function keys. (Remember that the function keys are labelled f1 through f8 and correspond to the soft keys on your screen.)
5. Press the **User System** key until you see the following set of soft keys on the screen.



6. Touch the **device control** soft key. The following set of soft keys will appear.



7. Touch the **"to" devices** soft key. A new set of soft keys will appear:



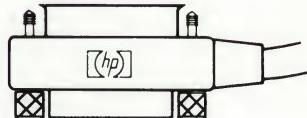
8. Look at the soft keys on the screen. Do any of them have an asterisk (*)?

- If so, touch the soft key with the asterisk (*) until the asterisk disappears.
- If not, this is all right. We want to start with no asterisks (*).

We are concerned with only three of the soft keys. You will choose one according to the type of printer cable you have connected to the printer you will use most often. You may **choose only one printer here**: a, b, or c.

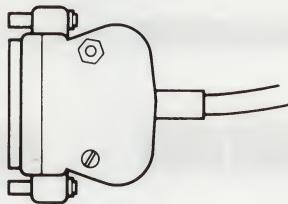
- a. Internal printer (model 2674A). Press the **INTERNAL PRINTER** soft key until the asterisk (*) appears.
- b. Look at the cable hooked up to your printer. If it is an HP-IB cable (pictured below) touch the **HP-IB DEVICE** soft key until the asterisk (*) appears.

HP-IB Cable



- c. Look at the cable hooked up to your printer. If it is an RS-232 cable (pictured below), touch the **SERIAL DEVICE** soft key until the asterisk (*) appears.

RS-232 Cable



Check your screen to make sure that only one soft key has an asterisk (*). If more than one has an asterisk, choose the one that you will want to print on most often. Make sure that it is the only choice that has an asterisk. (To get rid of the extra asterisks, touch the soft key until the asterisk disappears.) Remember, you may choose only one printer to be your primary printer.

9. Type the word **EXIT**. It will appear as shown in blue below. (Capitals or lower case letters are allowed. Also, if you make a mistake, just backspace and re-type.)

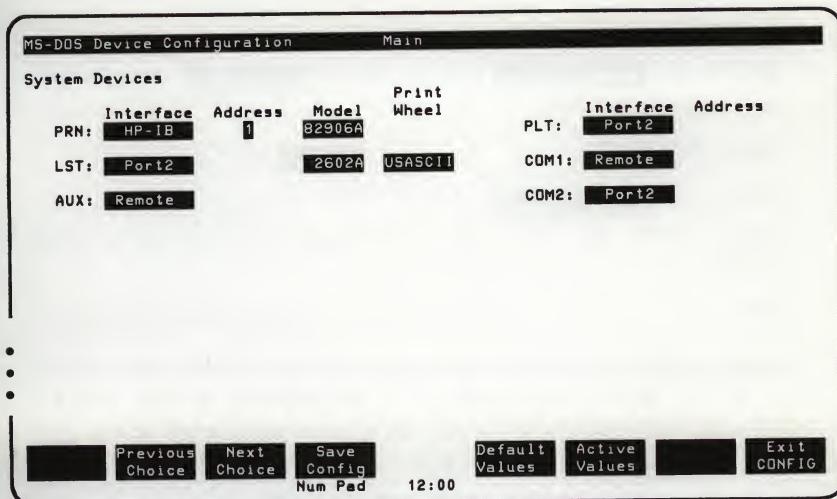
A > **EXIT**

10. Press the **RETURN** key. The P.A.M. menu will appear.

If You Have a Printer and/or a Plotter

Now you are ready to tell the operating system what printer(s)/plotter you have connected to your HP 150. To get to the Device Configuration menu, follow these steps:

1. Start at the P.A.M. menu.
2. Touch the box labelled **DEVICE CONFIG** until it is highlighted.
3. Touch the **Start Applic** soft key. A menu titled "MS-DOS Device Configuration" will appear. Since we are only configuring printer(s)/plotter, we will only look at the top half of the menu as shown below.



As you may guess by looking at this menu, there are many choices to be made. From this starting point, we will look at the choices one by one according to the printer(s)/plotter you have. Read the section headings below and follow the instructions in the sections pertinent to your equipment. For example, everyone with a printer should read the next section.

If You Have a Printer

The printer you will use most often is your **primary** printer. Just as you named your disc drives A and B in the disc drive section of this configuration menu, you will name your printer. Your primary printer is called PRN. The first entry is highlighted on your screen as shown in blue below.

Interface	Address	Model
-----------	---------	-------

PRN:	HP-IB	1	82906A
------	-------	---	--------

- If your primary printer is an **Internal Printer** (model 2674A), then you need to follow these steps. (If your primary printer is **not** an Internal Printer, skip these numbered steps; go to the next paragraph with a ■.)

1. Touch the **Next Choice** soft key until **Internal** appears in the highlighted box.

PRN:	INTERNAL	2674A
------	----------	-------

2. Touch the **Save Config** soft key. (The message "Device configuration has been saved." will appear at the top of your screen.)
3. Skip the rest of this section; go to the next section heading.

 - If your primary printer is connected with an **HP-IB** cable, then you need to follow these steps. (If your primary printer is **not** connected with an HP-IB cable, skip these numbered steps; go to the next paragraph with a ■.)

1. Touch the **PRN Model** box until it is highlighted. (It currently has 82906A as the model.)

PRN:	HP-IB	1	82906A
------	-------	---	--------

- .2 Touch the **Next Choice** soft key until your primary printer's model number appears in the highlighted box. (If you get back to 82906A without seeing your printer's model number, then try again; if it still doesn't appear, touch **Next Choice** until **Other** appears in the highlighted box.)
 3. Touch the **Save Config** soft key. (The message "Device configuration has been saved." will appear at the top of your screen.)
 4. Skip the rest of this section; go to the next section heading.
- If your primary printer is connected with an **RS-232** cable, then you need to follow these steps.
1. Touch the **Next Choice** soft key until **Port2** appears in the highlighted box. (Check the back of your system processor to make sure that your RS-232 cable is connected to Datacomm Port2. If it's not, it should be.)

PRN: Port2 82906A
 2. Touch the PRN Model box until it is highlighted. (It currently has 82906A as the model.)

PRN: Port2 82906A
 3. Touch the **Next Choice** soft key until your primary printer's model number appears in the highlighted box. (If you get back to 82906A without seeing your printer's model number, then try again; if it still doesn't appear, touch **Next Choice** until **Other** appears in the highlighted box.)
 4. Touch the **Save Config** soft key. (The message "Device configuration has been saved." will appear at the top of your screen.)

If You Have More than One Printer

You have just named your primary printer PRN. If you have a second printer you must name it. (If you don't have a second printer, go to the next section.) Your secondary printer is called LST. It is currently configured as follows:

Interface	Address	Model	Print Wheel
LST: Port2	2602A	USASCII	

- If your secondary printer is an **Internal Printer**, then you need to follow these steps. (If your secondary printer is **not** an Internal Printer, skip the numbered steps; go to the next paragraph.)

1. Touch the LST Interface box until it is highlighted. (The box currently has Port2 in it.)

LST: Port2	2602A	USASCII
------------	-------	---------

2. Touch the **Next Choice** soft key until **Internal** appears in the highlighted box.

LST: INTERNAL	2674A
---------------	-------

3. Touch the **Save Config** soft key. (The message "Device configuration has been saved." will appear at the top of your screen.)

4. Skip the rest of this section; go to the next section heading.

- If your secondary printer is connected with an **RS-232** cable, then you need to follow these steps. (If your secondary printer is **not** connected with an RS-232 cable, skip these numbered steps; go to the next paragraph.)

1. Touch the LST Model box until it is highlighted. (It currently has 2602A as the model.)

LST: Port2	2602A	USASCII
------------	-------	---------

2. Touch the **Next Choice** soft key until your secondary printer's model number appears in the highlighted box. (If you get back to 2602A without seeing your printer's model number, then keep trying; if it still doesn't appear, touch **Next Choice** until **Other** appears in the highlighted box.)

3. Touch the **Save Config** soft key. (The message "Device configuration has been saved." will appear at the top of your screen.)
 4. Skip the rest of this section; go to the next section heading.
- If your secondary printer is connected with an **HP-IB** cable, then you need to follow these steps.
1. Touch the LST Interface box until it is highlighted. (The box currently has Port2 in it.)

LST: Port2 2602A USASCII

2. Touch the **Next Choice** soft key until **HP-IB** appears in the highlighted box.

LST: HP-IB b 2602A USASCII

NOTE

Please note that the HP-IB address is automatically set at 6. Check your printer manual to make sure that the address switches set on your secondary printer are for address 6.

3. Touch the LST Model box until it is highlighted. (It currently has 2602A as the model.)

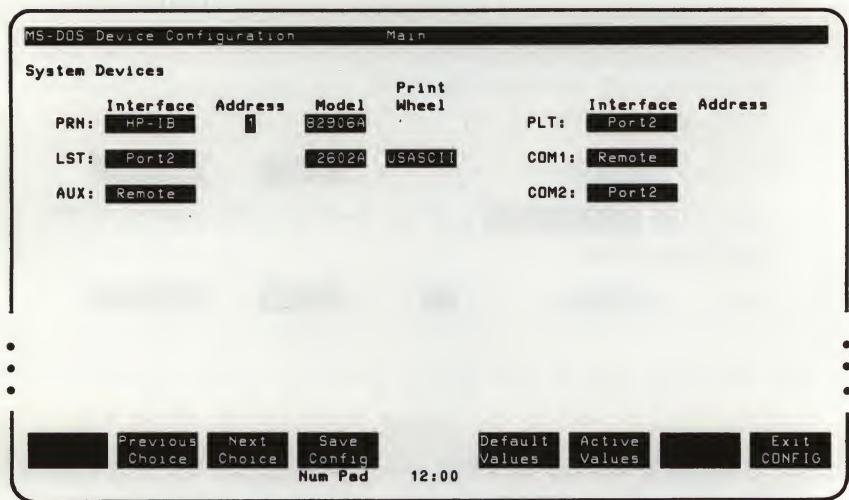
LST: HP-IB b 2602A USASCII

4. Touch the **Next Choice** soft key until your secondary printer's model number appears in the highlighted box. (If you get back to 2602A without seeing your printer's model number, then try again; if it still doesn't appear, touch **Next Choice** until **Other** appears in the highlighted box.)

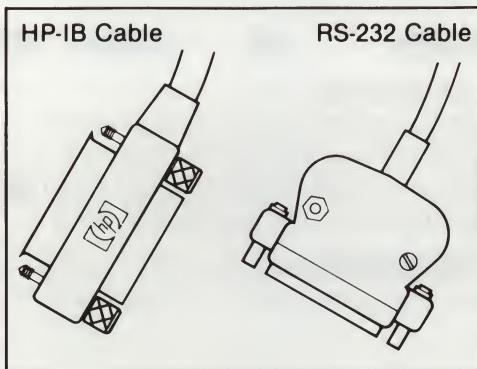
5. Touch the **Save Config** soft key. (The message "Device configuration has been saved." will appear at the top of your screen.)

If You Have a Plotter

A plotter must be named PLT. This is shown below. (If you don't have a plotter, go to the next section.)



Plotters are also configured according to the type of cable. The two types are pictured below. Compare the picture to the cable attached to your plotter.



- If your plotter is connected with an RS-232 cable which is plugged into the Datacomm Port2 outlet at the rear of your system processor, then:
 1. Touch the **Save Config** soft key. The message "Device configuration has been saved." will appear at the top of your screen.
 2. Skip the rest of this section. Go to the next section heading.
- If your plotter is connected with an HP-IB cable, follow these steps to configure your plotter.
 1. Touch the PLT Interface box until it is highlighted. (Currently, Port2 is the value.)
PLT: *Port2
 2. Touch the **Next Choice** soft key until HP-IB is highlighted in the PLT Interface box.
PLT: HP-IB 5
 3. Touch the **Save Config** soft key. The message "Device configuration has been saved." will appear at the top of your screen.

If You Have a Plotter

Some software graphics packages also require that the plotter be configured as AUX. In general, if you have a plotter, follow these steps.

1. Touch the **AUX: Interface** box on the screen. Make sure it is highlighted.

AUX: **Remote**

2. Touch the **Next Choice** soft key until the **AUX: Interface** entry MATCHES the **PLT: Interface** entry.
3. If you have an RS-232 cable, skip to Step 5. If you have an HP-IB cable, you must also change the **AUX: Address** entry to MATCH the **PLT** entry. Touch the **AUX: Address** box.

AUX: **HP-IB** **7**

4. Touch the **Previous Choice** soft key until a 5 appears in the highlighted box.

AUX: **HP-IB** **5**

5. Touch the **Save Config** soft key. The message "Device configuration has been saved." will appear at the top of your screen.

If You Have a Printer or a Plotter

You have now completed all the steps for this menu. To Exit:

Touch the **Exit CONFIG** soft key. The P.A.M. menu will appear.

If you have a printer or plotter connected with an RS-232 cable, then you must configure that printer or plotter according to the instructions in the next section of this appendix. (This is in addition to the configuration you have already done.)

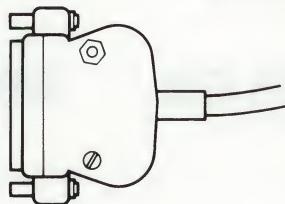
If you have no printer or plotter connected with an RS-232 cable, you may return to the main body of this booklet. (If you have a 9121D disc drive, go to page 4-17. If you have a 9133 disc drive, go to page 4-54.)

Configuring Your RS-232 Printer/Plotter

Introduction

If your printer/plotter is connected with an RS-232 cable (as illustrated below), then you have one more task to perform.

RS-232 Cable



Now your system processor and operating system know what printers and plotters are connected to your HP 150. Since you have a peripheral device (printer or plotter) connected with an RS-232 cable, however, there is one more step to perform.

1. Start with the P.A.M. menu.
2. Touch the box labelled **MSDOS COMMANDS** until it is highlighted.
3. Touch the **Start Applic** soft key. The following will appear on your screen:

Command v. 2.10
A >

NOTE

Again, if you have a model 9133 disc drive, the following will appear:

Command v. 2.10
B >

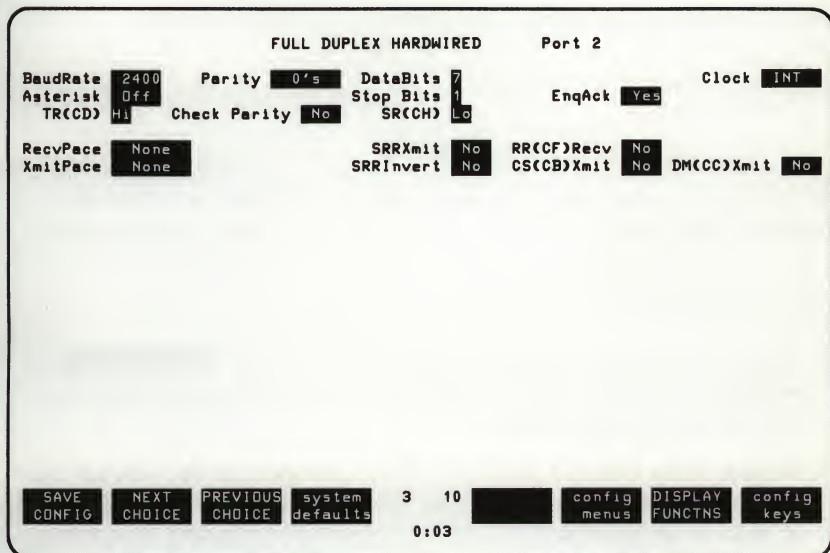
4. Locate the light-colored **User System** key on the top row of your keyboard.
5. Press the **User System** key until the following set of soft keys appears on the screen.

device control **margins** **service keys** **modes** **enhance video** **define fields** **set time** **config keys**

6. Touch the **config keys** soft key. The following set of soft keys will appear.

global config **port1 config** **port2 config** **terminal config** **accessory config**

7. Touch the **port2 config** soft key. The following display will appear on your screen.



Because there are so many different possibilities in this menu, the format in this section will be different from the step-by-step instructions you have previously seen in this booklet.

- The first section consists of instructions on how to change the values in the Port2 Configuration menu.
- The second section consists of examples of Port2 Configuration menus for different printers and plotters. You will want your menu to match the appropriate example. To make the changes, you will use the instructions you read in the first section.

Changing a Value

1. Use the **Tab** key on your keyboard (above the **Caps** key) to move the blinking cursor to the box you want to change. (The example Port2 Configuration menu will show these boxes in blue).
-

NOTE

You may also use the cursor keys on the keyboard to move the cursor. These are the arrow keys on the right side of the keyboard.

2. When you get the cursor positioned, touch the **Next Choice** soft key as many times as necessary to get the same value in the box as in the example.
3. Repeat steps 1 and 2 until you have changed all the values that are in blue in the example. DO NOT GO ON TO STEP 4 UNTIL YOUR SCREEN EXACTLY MATCHES THE EXAMPLE SCREEN.
4. When your port2 configuration looks exactly like that shown in the example, touch the **SAVE CONFIG** soft key. (You will automatically be returned to the soft keys in Step 5 of the previous section.)
5. Type EXIT as shown in blue below.

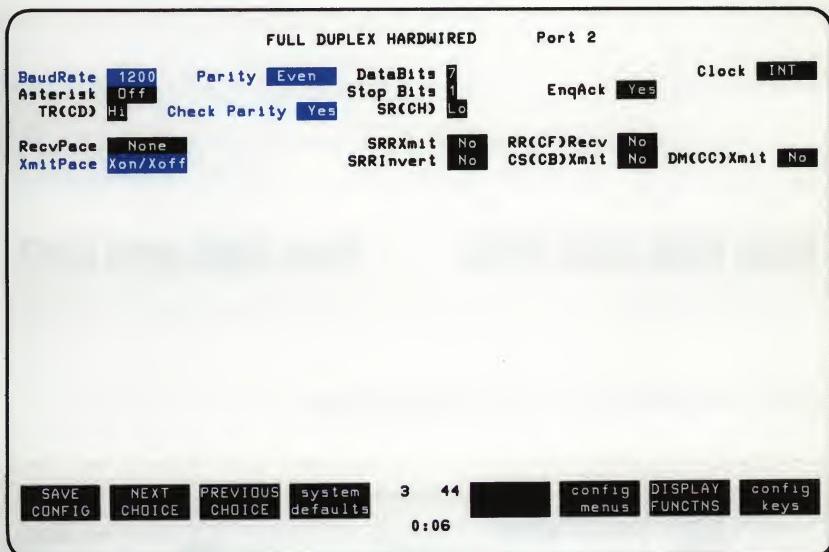
A>EXIT

6. Press the **RETURN** key.
7. Return to the correct page of this booklet to continue the installation of your HP 150. (If you have a 9121D disc drive, turn to page 4-17. If you have a 9133 disc drive, turn to page 4-54.)

Examples of Port2 Configuration Menus

Find the menu below that corresponds to your RS-232 printer/plotter. Change the values as described above. You will only need to change the values shown in blue in the examples. You will notice that the other values in the examples are already correct on your screen.

Port2 Configuration for HP 2601A and HP 2602A printers:



Port2 Configuration for HP 2932A, 2933A, and 2934A printers:

FULL DUPLEX HARDWIRED								Port 2			
BaudRate	2400	Parity	None	DataBits	8	Stop Bits	1	EnqAck	Yes	Clock	INT
Asterisk	Off										
TR(CD)	H1	Check Parity	No	SR(CH)	Lo						
RecvPace	None	SRRXmit	No	RR(CF)Recv	No						
XmitPace	Xon/Xoff	SRRInvert	No	CS(CB)Xmit	No	DM(CC)Xmit	No				
SAVE CONFIG	NEXT CHOICE	PREVIOUS CHOICE	system defaults	3	10	config menus	DISPLAY FUNCTNS	config keys	0:05		

Port2 Configuration for HP 82905B printer:

FULL DUPLEX HARDWIRED								Port 2			
BaudRate	4800	Parity	None	DataBits	8	Stop Bits	1	EnqAck	Yes	Clock	INT
Asterisk	Off										
TR(CD)	H1	Check Parity	No	SR(CH)	Lo						
RecvPace	None	SRRXmit	No	RR(CF)Recv	No						
XmitPace	None	SRRInvert	No	CS(CB)Xmit	Yes	DM(CC)Xmit	Yes				
SAVE CONFIG	NEXT CHOICE	PREVIOUS CHOICE	system defaults	8	10	config menus	DISPLAY FUNCTNS	config keys	0:04		

Port2 Configuration for HP 7470 and HP 7475 plotters:

FULL DUPLEX HARDWIRED				Port 2	
BaudRate	9600	Parity	None	DataBits	8
Asterisk	Off			Stop Bits	1
TR(CD)	Hi	Check Parity	No	SR(CH)	Lo
RecvPace	None	SRRXmit	No	RR(CF)Recv	No
XmitPace	Xon/Xoff	SRRInvert	No	CS(CB)Xmit	Yes
				DM(CC)Xmit	No
<hr/>					
SAVE CONFIG	NEXT CHOICE	PREVIOUS CHOICE	system defaults	3 10	config menus
0:03					
DISPLAY FUNCTNS config keys					

NOTE

Don't forget to follow steps 4 through 6 in the previous subsection. You must save the configuration menu or your printer/plotter will not operate correctly.

1. *What is the best way to learn?*

2. *What is the best way to teach?*

3. *What is the best way to evaluate?*

4. *What is the best way to support?*

5. *What is the best way to assess?*

6. *What is the best way to communicate?*

7. *What is the best way to collaborate?*

8. *What is the best way to engage?*

9. *What is the best way to inspire?*

10. *What is the best way to lead?*

